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Industrial Relations in the Civil Service

SIR LESLIE WILLIAMS, C.B.E.

The article that follows is based on a lecture that Sir Leslie Williams gave in the 1974 Civil Service College series on 'Some Management Problems in the Civil Service'. Sir Leslie was from 1966 until his retirement 12 months ago Secretary General of the Civil Service National Whitley Council (Staff Side). Prior to 1966 he was General Secretary of the Society of Civil Servants. He is currently Deputy Chairman of the Civil Service Appeal Board and participating in a review of Civil Service training. In the article Sir Leslie expresses some personal views. —*Editor.*

Introduction

There is little doubt that it was the pay disputes of last year and the subsequent dispute on the pay of scientists that focused attention on industrial relations in the Civil Service. Because of the application of incomes policy to the Civil Service, in the past year or so there was an interference with the operation of Civil Service pay agreements which were set aside and which led to an unprecedented degree of protest, demonstration and militancy—a development which surprised many of us who had spent a long time connected with the Civil Service. It also brought to the surface many other discontents which are now the subject of a review: the wider issues review. I must say I find it rather ironic that it appears to take a dose of militancy to force attention to problems which the National Staff Side have stressed over many years; but one cannot be other than glad that some of these problems are now being examined.

Does militancy pay?

Views will differ as to whether it was the demonstration of militancy last year, or whether it was the well-argued and well-presented representations to Ministers and the evidence which we gave to the Pay Board, which led to the anomalies report and which subsequently led to settlements of pay for the administration group. Naturally, as a life-long protagonist of the Whitley system of joint consultation and negotiation, I would contend that the continuous pressure that we exerted upon Ministers, and the comprehensive case that we put to the Pay Board, were crucial in securing the treatment of the Civil Service as a special case. But many will claim that the events of 18 months or so ago demonstrated beyond all doubt that militancy pays, and I think that those in management positions must now assume that militancy will continue to be used as a weapon when the Civil Service feels a sense of injustice. If the public services generally continue to feel a

sense of unfairness in relation to the rest of the community, militancy however ill-timed, however undesirable, however surprising, may not only be unavoidable but may indeed be justifiable in the circumstances. Unless there can be a system and institutions which can operate in such a way as to ensure fairness for the public services then I believe that we shall face trouble on a very wide scale indeed. Perhaps I can return to that a little later. Not only is there the certainty of the use of militancy in justifiable cases, but once the step has been taken, and is found by those concerned not to be so difficult after all, there is always the risk that industrial action may not be confined to cases of injustice. Indeed, who is to be the judge of whether the situation is unjust or not? If that were to be the case, if some people were tempted to become trigger-happy, then the position of responsible leaders both on the management side and on the staff side would become extremely difficult. It is for those of us who care about the Service to do all that we can to strengthen the forces of moderation; but one cannot even begin to win that battle unless the general background is one of fairness.

Attitudes of Civil Service unions

I think it would be useful at this point to take a look at the position and the attitudes of the larger Civil Service unions; I say 'unions' because although in the Service we like to still call them Staff Associations, that is not legally or in reality the position. Legally they have always been trades unions; in practice all except one of importance are now affiliated to the TUC. And they are unions in the full meaning of the term, albeit that they represent white collar workers in the public service.

With over 200,000 members, the Civil and Public Services Association is the largest of the Civil Service unions; it is a great union by any standards, and one to which, I daresay, many now in management positions have belonged with pride in the past. The CPSA Conference which took place in May was attended by over 1,100 delegates. Of that 1,100 delegation, the Department of Health and Social Security had about 240 delegates, as did the Ministry of Defence. Each of these delegations commanded about 20 per cent of the card vote, thereby showing the consequential effect of the creation of large departments on the union structure.

In 1969 the CPSA adopted a strike policy. It was not for an all-out withdrawal of labour, but for selective stoppages where necessary, works to rule and overtime bans, some of which have been put into operation since. In 1971 they set a new target of £5 million for a fighting fund. In 1972 the growth of militancy was obvious, and last year you will remember the emergency motion that was passed banning work in DHSS on the pensions increase which was due in October last year. That was subsequently reversed. A similar situation arose again in DHSS earlier this year. As I understand it, a decision was made by the Minister without consultation with the staff to adopt a certain

timetable—hardly 'in place of strife' one might think. In consequence a reaction arose of which perhaps few of us would approve in principle but which one can understand.

The Society of Civil Servants, with over 60,000 members, is also much more militant than it was. A very strong campaign for the shortening of the executive officer scale a little while ago led to a great deal of protest and demonstration which could have been avoided if management had grasped that particular nettle much earlier. Here is a case of 'too little too late' to appease a restless membership, and so there is developing a feeling of resentment in the middle ranks and the junior ranks of the service. In 1973 when the general protest demonstrations took place on the pay situation there were the members of the SCS on the picket line. There they were quite active, perhaps feeling to some extent that they must demonstrate their virility in the face of an attack from Clive Jenkins of the ASTMS; but whatever the reasons may have been, the action was taken and the same action may be taken again when somebody judges that the situation requires it unless there is a sense of fairness.

The Institution of Professional Civil Servants now has nearly 100,000 members, representing many professions. A serious dispute raged a little earlier this year on the pay of scientists; we have seen protest demonstrations from the scientists and have seen them also turning to the belief that militancy may pay. And so, even in the professional ranks of an organization which has been traditionally very responsible and restrained, we have seen the signs. Scientists felt very bitter and that they had been let down. They felt particularly that they were not understood and valued sufficiently by the rest of us.

The Civil Service Union representing messengers, cleaners and a number of other grades now has 40,000 members. The CSU has always been prepared to exert industrial pressure but to do so selectively in justifiable circumstances. They were exercising considerable restraint last year, but would always be ready to react in a situation where their membership was being dealt with unfairly.

I hope this outline gives a picture of the position in the various Civil Service unions today. It is much more difficult now for some of the moderate unions, or those who want to be moderate, to remain so. Organizations such as the Inland Revenue Staff Federation—again with 60,000 members—are coming under pressure to join in the more militant posture. What are the reasons for this more militant attitude? It has not come about because some new bug or disease has suddenly attacked the Civil Service. The reasons lie elsewhere. We are not immune from what goes on in the rest of society; we are not basically different people from other people. Civil servants are now not prepared to tolerate unfairness. They will no longer respond to authoritarian management; and they have a feeling of remoteness from top people. They don't know Whitehall very well and may not think highly of what they do know. Two-thirds of them work in a quite different Civil

Service, in contact with the public: sometimes in very difficult, demanding and often unpleasant situations. If one was to try to think why there are so many troubles in DHSS compared with some other departments, it might well be the public; the contact is difficult for young people to handle. Stress situations arise and although I am sure that DHSS is doing all it can to understand and to grapple with these problems, their difficulties run very deep at the present time. And there is a feeling abroad among the rank and file and the younger generation that we have lavished too much care and attention on the top people. I agree with that. I think it is time we lavished a bit more care and attention on the rest.

Whitleyism under pressure

As you can imagine, the situation that arose last year imposed a considerable strain on the National Staff Side itself, which after all is the collection of these and other unions. It was a divisive situation. The incomes policy, designed of course to tackle inflation but also to help the low paid as far as was possible within that framework, proved itself to be quite divisive. You will recall that under the Stage II settlement the Staff Side agreed to redistribute a modest amount of money from the better paid to the less well paid. That created deep divisions on the Staff Side. The First Division Association and the Society of Civil Servants were affronted, whilst the CPSA and the Civil Service Union, with support from the IPCS and the Inland Revenue Staff Federation, thought it was only just. It was a very difficult time for the Staff Side, and it shows, perhaps, how difficult it is to deal with this problem of low pay and relativities even within a family, a family as closely knit and, as we would like to believe, as well disposed to its various parts as the Civil Service. Of course, the whole Staff Side regardless of grade were united in their opposition to the setting aside of the various pay agreements. But there were differing views about the militant tactics. Some people supported them and thought they were inevitable and justified; others thought not. So we walked for quite a time on a dangerous tightrope in a difficult year, my last year with the Staff Side.

Fortunately, Whitley withstood the strain. We were able, of course, to draw upon great reserves of strength: our system has been going for well over 50 years and has certainly survived enough crises to enable us to deal with one when it arises. Not that this comes any easier, indeed it becomes more difficult as the crises succeed each other. Since the Royal Commission in 1955–56 there has been a gradual acceptance within the trade union movement of the Civil Service of an all-service outlook: a greater willingness to realize that people cannot 'go it alone' in respect of particular groups and grades: that we are after all very much interrelated one with the other in career structures. Also we have what is, perhaps, a somewhat unique practice: that the General Secretaries of these important unions meet at least once a week with the Secretary General of the Staff Side to transact business—business

arising from their own members, from the annual conferences and a tremendous amount of business arising from proposals put by the Official Side. You cannot sit around a table every Tuesday morning and drink beer in the pub in the lunch break without taking in each others washing in difficult times! Therefore, between the leaders of the various unions in the Civil Service, there is a great deal of goodwill and a common understanding of each other's difficulties, and a willingness to try, however difficult it might seem, to reach solutions acceptable to all. In the nature of that kind of arrangement, we are very accessible to the Official Side for continuous discussion and contact. One of the Secretary General's tasks is to keep in continuous touch with his colleagues and with members of the Official Side so that he always has a finger on the pulse.

I suppose that, in those rather difficult times, the fact that there is a separation of powers had some advantage. In other words the Staff Side is the negotiating body for the Civil Service as a whole. Its job is to present and represent, and to argue and to put the cogent case while the individual unions organize their members and are free to demonstrate. So that although it was an uncomfortable period, one could bridge it on the basis that the Staff Side got on with one part of the job while the membership were getting on with what they thought to be their rightful part in the circumstances. As a result we never lost contact with the Official Side, and this, I think, is one of our industrial relations strengths in the Civil Service—and long may it continue so.

Even at a time when our pay system was, as we saw it, under attack—under attack because the incomes policy set aside various pay agreements—we were, nevertheless, out of London from time to time having discussions with representatives of the Civil Service Department about the longer-term kind of pay arrangements that we wanted.

I find these informal joint discussions a valuable feature of our industrial relations, but they are not a substitute for winning the support of rank and file members. One can in some ways have a cordial and sound relationship with the Official Side which can sometimes be misunderstood by members when there is a great seething row going on over something about which they feel justifiably angry. So last year was not an experience to be repeated, because however good our system and however well based our institutions, they cannot in my view go on surviving the kind of continual attack that we have had over the last 10 years. Members are bound to question a system if it can be set aside whenever it is convenient and whatever the national reasons may be. They are very conscious of the effect of inflation on their pocket just as one is concerned with the national position. A great strain is therefore placed on our system when such things happen, but by the time I left the Staff Side about 12 months ago we had, I think it is fair to say, turned the corner. The anomalies report by the Pay Board greatly eased the situation. The dispute on the pay of scientists has since been resolved; but at least the system for settling Civil Service

pay has survived and the willingness to work together is still there.

We have been able over the years on the National Staff Side to secure a remarkable degree of working unity and the Staff Side's role has developed steadily. There are now many more national agreements covering the Civil Service as a whole, perhaps importing sometimes rather more rigidity than is desirable, but at any rate having advantage of equity and easier administration. Those agreements are worked out with the National Staff Side, comprising the unions wearing their Staff Side hats and accepting collective responsibility. Pay negotiations are now conducted within the framework of a national agreement, even though they are handled by the unions representing the particular grades concerned. The Pay Research Unit is administered by a joint steering committee of both sides of the National Whitley Council. We were very careful to do that in case we wanted to wind it up some time. In fact, of course, we have no wish to wind it up so far as I know, because pay research with whatever enforced limitations there may have been at various times, has certainly been something to which the Civil Service has been able to cling. One thing is certain: without such a well-established and continuous system, we would never have got the anomalies report. Indeed, members of the Post Office know that they suffered because they had not introduced a system on leaving the Civil Service and were caught in that difficult position. But despite these advantages there is always a difficult balance to be held on the Staff Side. We have to reconcile conflicts and it is understandable that at times members see the National Staff Side as a 'buffer' which stands between them and the enemy. Members may also see the National Staff Side as standing sometimes in the way of decisions made at their annual conference. The great majority of conference resolutions have to be referred to the National Staff Side for decision and not all will gain majority support.

Organizational change

Various organizational changes in the Civil Service have affected the representative position on the National Staff Side. The departure of the Post Office was, of course, a great upset and, for many traditional reasons within the Civil Service trade union movement, very much regretted. The Union of Post Office Workers and the Post Office Engineering Union were strong members of the Staff Side, and great allies when there was a battle on. Their departure was a great loss to the Civil Service, and a painful piece of surgery to which we had to submit. In terms of purely numerical strength, the CPSA can now be said to dominate the Staff Side. There is bound to be a temptation from time to time for the CPSA to try to 'go it alone', though their leaders know that this is very difficult because of the integrated structure of the Civil Service. But CPSA members feel little in common with management grades.

Other features of reorganization that have flowed from Fulton have

also altered the pattern of trade union representation such as the absorption of some of the departmental grades into the general service structure. For example, the Ministry of Labour Staff Association, which clung to its title through thick and thin and despite all the fancy titles that departments accumulate from time to time, has now amalgamated with the CPSA, taking with it not only clerical staff but some executive officers as well. The County Court Officers Association, following the reorganization of the Lord Chancellor's Department, has also amalgamated with the CPSA, again taking with it some members right up to Principal level. Whereas, hitherto, we have always had the clearest possible demarcation between the CPSA representing clerical staff on the one hand and the Society of Civil Servants representing executive staff on the other, the situation now is beginning to become blurred.

The merger of the administrative and executive classes has blurred the representational lines as between the First Division Association and the Society of Civil Servants. The former has now disaffiliated from the SCS so that the possibilities of a closer relationship between the two seem to have receded. How long one will be able to hold the situation where one union represents a certain kind of membership within a grade and another represents a different kind is a difficult question. One thing above all that can defeat reorganization is for people in the same grade to belong to different unions; it is bad for industrial relations and defeats the purpose of the reorganization which is to bring people together. There are now, therefore, some potential demarcation problems. But, on the other hand, there are very welcome signs of mergers taking place. The Customs and Excise Group is amalgamating with the SCS on 1st January 1975, and the Association of Officers of the Ministry of Labour is likely to merge with the Society.

I have tried to show how changes that take place in the Civil Service affect very directly the trade union structure. Naturally the National Staff Side has been reviewing the position and has now published a discussion paper about the future of the Civil Service trade union movement. It examines two possibilities. One possibility might be a single Civil Service union, which would sweep away existing barriers. There would be great difficulties, no doubt, of accommodating the wide range of views within one organization, and the fact that some organizations, the majority as it turns out, are affiliated to the TUC whilst others are not is also a complication. The other possibility would be to have a more modest re-grouping of unions in line with current trends. Under this arrangement one might have four or five groups of unions with a federal kind of organization at National Staff Side level, with improved research facilities and greater resources. In my view the resources now available to the National Staff Side as the central negotiating body are wholly inadequate for its wide-ranging tasks.

I think also there is room for discussion of the relationship between the National Whitley Council and Departmental Whitley Councils.

There is a constitutional fiction that they are quite separate. I suppose it is good constitutional stuff, but in fact it is quite impracticable for them to be independent of each other. On the Official Side, through monthly meetings of the Establishment Officers, there is a mechanism whereby the Civil Service Department is made receptive to the views of departments. There is no such system on the Staff Side because if a Departmental Staff Side, or some of its parts is concerned about something—about the implementation of a national agreement, for example—each union concerned is expected to feed it back through its own headquarters before it can be referred to the National Staff Side. It is not the proper thing for the Chairman of a Departmental Staff Side to ring up the National Staff Side, although it is often done of course. I think links such as these need strengthening in order to improve consultation and communication.

There are special problems for Staff Sides and constituent unions when large departments are created. All the various unions have had their separate branches in the old departments, all designed to make it possible for members to attend branch meetings. The purpose of having a branch of a union in the Civil Service, as elsewhere, is that it should be located and organized so that it is easily accessible to members. Members now seem to prefer the barricades, but in more normal times it must surely be accepted that membership pressure will be exerted only at branch meetings. When a large department is created, the people who have been elected by democratic processes to serve on a branch committee or as chairman or secretary are made redundant compulsorily as a result of a management decision. New branches and co-ordinating machinery have to be set up by the unions. A new Departmental Staff Side must be formed at the very time when the Official Side are expecting the Staff Side to respond to urgent demands. Machinery of government changes thus create problems not only for individual civil servants but also for the staff movement. I think these problems need to be understood for it is at times such as these that Staff Sides need more help, more facilities to do their work and more opportunities for training.

Perhaps we might now examine the way in which the Whitley system is working on the shop floor in the local office, in the local establishment, because I believe more and more, as I look back over all this, that although there is remarkably good and effective central machinery to deal with what has to be dealt with centrally, in the end it is what happens to an individual in his own working unit that matters most. That is where his loyalty or lack of loyalty is likely to lie. He will not know the name of the Permanent Secretary and he may not know the name of the Minister; but he will know the name of his office supervisor, and if the supervisor is 'difficult' then obviously the working unit will not be a happy one. That is the area where one needs to cultivate better management and also, perhaps, to develop in a more participative way the opportunities for joint consultation and discussion

and for decision sharing that the Whitley system can provide. We have tended, I think, to assume that the Whitley system will always continue to come to our rescue in difficult times. Whitley probably needs a spur and I would like to see a review undertaken at the local level to see what can be done, because unless we can offer some alternative to the intelligent and restless younger generation—something that they themselves can help to achieve—then, of course, demonstration and protests will appeal to them even as a way of life, whether there is just cause or not. I hope that we are going to have the imagination and determination to see whether we can draw the younger generation into our activities because, as in the past, the future effectiveness of Whitleyism and all our national institutions will depend upon the quality of the people involved.

Role of the CSD

I have discussed mainly the Staff Side and its affairs; now I should like to turn to the Official Side and mention in particular the role of the Civil Service Department which, after all, was set up to deal with some of the problems to which I have referred.

At the time of Fulton there was undoubtedly a very strong case for the setting up of a separate department. We were confronted with major proposals for the restructuring of the Civil Service and for the development of positive personnel policies, and it seemed doubtful whether the pay and management divisions of the Treasury could cope with these additional demands, or bring to them the fresh approach that was required. There seemed to be a good case for the Head of the Civil Service to have a department, a personnel department, which was his own, which he could run and which would be at the service of the rest of the Civil Service. Views were divided about this on the Staff Side at the time; we had no formal position. I personally thought that, on the whole, it was the right thing to do because it seemed to me that we were entering a period where the Civil Service, if it was going to be restructured, if it was going to have new personnel policies, and if it was going to have a general spring clean, needed a new piece of equipment with which to do it. We had some misgivings at the time about ministerial arrangements. The Staff Side had always valued the fact that when we were in a crisis situation and the Treasury was responsible we would in the the last analysis go to the Chancellor of the Exchequer. Although, of course, one could not expect the Chancellor to take a close interest in day-to-day matters, one always had a feeling that if there was a problem of magnitude and one was able to gain his understanding of it, then you knew you had the ministerial weight to carry matters to a conclusion. We were not quite sure what Ministers for the Civil Service might turn out to be, and while it is very prestigious no doubt to have the Prime Minister as our minister, we know in practice that the number of occasions when one can go to No. 10 is limited. I think we were extremely fortunate that our first two ministers, Lord

Shackleton and Lord Jellicoe, were excellent ministers, and the Staff Side enjoyed a constructive relationship with them both. They were both always most helpful. However, I do not think that anyone can pretend that Lords Privy Seal are at the top of the political power pyramid, and this has been always one of my misgivings and doubts when major issues affecting the Civil Service are at stake.

It seems to me that recruitment to the Service, the training of civil servants, their career development, their pay and conditions ought to be an integrated process. I do not see how these things can be dealt with successfully in separate compartments. I assume that it is one of the main functions of CSD to bring these together. I do not doubt that their task is made more difficult by the creation of the large departments —but perhaps CSD may have been responsible for that too! It was not helpful that the post-Fulton reorganization coincided with the great upset in departments of restructuring themselves. The deluge of advice, paper and so on that descended upon departments from the National Whitley Council or the Civil Service Department was almost intolerable at that point in time. So, the Official Side as well as the Staff Side has been confronted with large-scale problems in a period of intense pressure and it would be difficult to make a fair assessment of the contribution of CSD at this stage. Perhaps it would be timely to review the role of the central departments, and in doing so there might be some advantage in looking at organizations and procedures elsewhere: for example, the Public Service Board in Australia and the Civil Service Commission in Canada. But, at any rate, I think that now, after six years' experience, it would be useful to have another look at the central machine.

Civil Service is not an island

The Civil Service is not, of course, an island, and even if we improve our organization and win a better atmosphere in the Service we shall not be immune from the troubles which afflict society generally. The Civil Service will always be especially vulnerable to outside events and to government attitudes; and we have, therefore, a special interest in whatever national developments take place. Whether there is a statutory or a voluntary incomes policy, it seems to me there will always be repercussions in the public services. I personally cannot see how an incomes policy, whether it is voluntary or whether it is statutory, can operate without some monitoring mechanism and without somebody to review special cases. Yet governments will get rid of bodies which have been trying to do something in this field. The Conservative Government disbanded the National Board for Prices and Incomes; and the Labour Government have abolished the Pay Board. If we look around at the present time, particularly to the position in the nursing profession, most of us must feel guilty about the situation. (Note: The pay of nurses has been substantially improved subsequently.) The teachers, social workers, local government workers, everybody is on

the march. At least in the Civil Service we can cling to our pay system —if only people would leave it alone. Even when they will not leave it alone we usually manage to rescue it again. But in many of these public services, as far as I can understand, there is no established pay system. It seems to me that unless we can have some kind of institution such as a Relativities Board which is able to promote public discussion in an attempt to reach a consensus on these special cases, we shall face real trouble in the public services.

We have an interest in other matters which are now under political discussion; for example, the question of what is to succeed the Industrial Relations Act. We have an interest in conciliation and arbitration. No organization has been more loyal to the concept of arbitration than the Civil Service. Over the years we have pioneered it and have been very loyal to it. The number of cases has fallen markedly. Before the Royal Commission in 1955–56 about 30 cases a year were referred to arbitration in the Civil Service; following the introduction of the pay research system the number has fallen to five or six a year. Arbitration in the last analysis is extremely valuable. Confidence in Civil Service arbitration should be strengthened following the recent reference in respect of the Professional Technology category. Yet the industrial unions turned against conciliation and arbitration because a government refused to offer conciliation when an offer for local authority manual workers in 1970 was considered to be too high. A conciliation service cannot be sustained on the basis that conciliation is offered only when it is convenient to do so, and I rather fear that the great reputation that Ministry of Labour conciliators built up has been unfairly snatched away. I have doubts whether one should try to operate an incomes policy in a department which is also responsible for labour problems. We have not used the conciliation service in Civil Service disputes. There has been a constitutional view that it was not possible to use the Ministry of Labour conciliation officers in disputes where ministers are making decisions for the Government as employer. The National Staff Side has, of course, provided conciliation free in many cases. The Secretary General of the Staff Side may informally be able to help parties in dispute to find a solution, but this is not the real role of the Staff Side which cannot resolve major disputes in which constituent organizations may be involved. The current situation is different, the atmosphere is different, the membership is more volatile and the problems in an inflationary situation are bound to continue to arise. The dispute in DHSS was one in which, in industry, conciliation would probably have been used. In this case apparently it would not have been proper because a government minister was involved. This is a restriction which should be re-examined now that the independent Conciliation and Arbitration Service has been established.

Leadership and loyalty

I have discussed mainly organizations and institutions. I would like

finally to turn to the individual, because whatever organizational changes take place, whether within the Civil Service or outside, these will not solve all our problems.

Clearly it can only be good if there is a healthy and robust relationship between Official and Staff Side whether at national, departmental or local level. But that will not of itself guarantee goodwill and responsiveness from individual civil servants. In this respect management and Staff Side face the same problem: how can we provide leadership and win loyalty? We seem temporarily to have lost the key. The Civil Service is very labour intensive. There is an immense investment of human capital; it is, in fact, the Service's only real asset. And what a great asset it is and has proved to be. And what great potential it has if it is used to the full, if the talents of all are maximized. The most common complaint that one hears apart from pay is that abilities are not being used to the full. Indeed when the survey was carried out on wastage from the Civil Service that was the factor that came out at the top.

I believe that the individual civil servant is more likely to identify himself with the working unit and to offer his loyalty to his section leader. I wonder in some ways whether leadership is now regarded as old-fashioned. The matron at the hospital of which I am Chairman was saying to me the other day 'What we need is a bit more leadership and a little less management'. I think I understood what she meant. Perhaps there is something here that we could just think about. One cannot lead in a paternal or patronizing way; that would be totally counter-productive. I feel that some of our key people are those who lead the sections and who run the local offices, and they are, perhaps, the people we have not done enough to support. I think we need to do more to back up our line managers with a good personnel service, and to give them our trust and recognition. People want to feel that their contribution is understood and valued and that they are going to get support when things are difficult. I believe we have there the possibilities of a more perceptive and sensitive leadership.

There is also the important matter of communications, which is one of our battles in such a large-scale organization. I think that on the whole the Staff Side is rather better at communicating than the Official Side, and that is not perhaps saying too much! But through their various monthly journals, through the various branch meetings, week-end and summer schools, the unions in the Civil Service are trying very hard to keep members fully informed. The unions are not getting the response they would like, but they are trying hard to interest people. It is in the management interest that good people, responsible people, should be actively interested in the staff movement. As regards the role of communications, I have come to the conclusion that the written word tends to be a very poor substitute for direct personal contact. It is much more satisfactory and rewarding if one can talk to a small group and have a real discussion. How much it seems to do for

them. I have always found it surprising that a visit from someone like myself to some outstation is greatly valued. It is not that the visitor is very important; but that the visit gives to those concerned an opportunity to talk things over. There is a two-way spin-off. I think we have now to try to build our communications on the personal level.

Perhaps it ought to be said that analysis is not an alternative for action and that if better leadership at all levels is to be offered, whether it is on the Staff Side or on the Official Side, it will be essential to put in more resources than have been given in the past. Let me say quite bluntly that the Civil Service expects senior people to fight for the resources that are necessary to do this work. Those who are responsible must be seen to be fighting for the conditions and resources that are needed for an efficient and effective Service. There is much at stake; and 'too little too late' is one of the feelings that I have about the mistakes that have sometimes been made. That can be very damaging both to the Staff Side and to the Official Side. I think that the needs of the Service are now known and recognized; and now is the time to see that these needs are met.

Size and Morale

Tom Lupton

The article that follows is also based on the transcript of a lecture given in the 1974 Civil Service College series on 'Some Management Problems in the Civil Service'. The author is Professor of Organizational Behaviour at the Manchester Business School; in the article Professor Lupton expresses some personal views. —*Editor.*

Introduction

I shall address this topic under three main headings:

First, I shall state as plainly as I can the conventional wisdom on the social and psychological problems of large-scale organizations.

Second, I shall examine the logical status of the conventional position, and the empirical support for its propositions. I can show, I think, that the structure of thought revealed, and the empirical support for it, is much too frail to support the proposals for action which have been loaded upon it.

Third, I shall propose an alternative logical scheme which seems to me to represent the complexities of the matter more accurately and, because it does, I shall argue that it forms a firm basis for organizational diagnosis from which effective practical action can follow.

The conventional position

There have been very few systematic investigations of the relationship between size and human relationships in an organizational setting. Such investigations as there have been have usually taken some statistic which is assumed to indicate the state of morale and the quality of relationships, such as absenteeism, labour turnover, the incidence of strikes, or the level of positive interest in the affairs of the organization, and have tested for an association of these variables with size, usually defined as the number of people employed in the unit under study. The findings have lent support to an already existing theory that when human organizations get bigger they get more impersonal; control becomes more remote; specialisms proliferate leading to departmentalism; pyramids of authority increase in height; control procedures are formalized and standardized; paper communications increase; and so on. The result is that the individuals who make up the organization, and particularly those who are at the operating points—on the shop floor or in the routine clerical jobs—find it difficult to feel any of the sense of identity with the organization, any of the sense of commitment to its purposes (or even knowledge of them) that the individual in a small organization might feel. There is a technical word for this sense of not belonging, this sense that one's work has not psychological meaning, this feeling of just being an unimportant piece in a vast jig-saw, the total shape of which is beyond one's comprehension; and the word is *alienation*. Its widespread manifestation is sometimes categorized as low morale.

If you were to ask an adherent of the conventional position why indices such as high strike incidence, high voluntary absenteeism and high turnover are thought to be connected with all the things that alienation describes, he would reply that it is fairly obvious that if a man is oppressed by his experience of being just a cog-in-a-wheel then he will react by direct protest, individually or collectively, generating sabotage, conflict and possibly collective withdrawal from the situation, or by withdrawing individually from the organization, either temporarily or permanently.

If, on the other hand, the things that alientation describes are absent, then we might expect to find an absence of sabotage and conflict, and of the urge to withdraw. According to this school of thought those things must be less likely to occur or be completely absent from small organizations. Hence, we might expect lower levels of conflict, absenteeism and staff turnover in small-scale organizations than in large ones.

What does this position imply for the matter of efficiency? It would seem reasonable to deduce that alientated people, however much they are bribed, persuaded or cajoled, are not likely to put much effort into their work; nor is it likely that a disjointed organization, wracked by departmentalism and conflict, and turning over its staff rapidly, will develop easily that sense of collective dedication to its purposes

which is thought to release human intellectual and physical energy.

If all this is so obviously the case, as it must seem to be; if, also, it is considered to be socially undesirable that alienation should be allowed to continue, then why ever create large organizations, or why, having learned what they are capable of inflicting on the people who work in them, not dismantle them?

These questions find their answers in another part of the conventional position. The answers do not, however, solve the problems posed. They raise dilemmas, proposals for the resolution of which are to be found in more recent movements of thought and managerial practice.

Economics of scale

Simply, the argument against splitting-up big organizations into completely autonomous little ones is the 'economics of scale' argument. The position is a familiar one and I will not dwell on it too long. Like the argument that links size and alienation, the argument that links size and economy has logical, and some limited empirical, backing. That is to say there are very good reasons to suppose that to buy materials in bulk is cheaper than to buy them in penny packets; and big organizations have that opportunity. I would imagine that a big organization that requires a large bank loan gets more sympathy from a bank manager than a small man with a large request. When risks of exploration and development have to be carried the small-scale organization is at a disadvantage; the large one is not. Large organizations can probably effect economies in marketing and distribution that are impossible for small ones. Systematic and formal schemes for staff appraisal, development and training are possible, one imagines, only when organizations are large enough to carry sufficient 'slack' to permit such developments. It is also said that sometimes technical interdependencies can be exploited more easily by large organizations than small ones, because large organizations can provide more space and call on more specialized technical competences.

Economic efficiency is a strongly held value in our culture; it is apparently still much more powerful than the value placed upon contentment, social cohesion and satisfaction with work. This is what creates the dilemma in the conventional wisdom. The question now becomes: how can the claimed organizational advantages of bigness be preserved without the damage that may be done to their efficiency by the consequences of the social and psychological problems they create for those who are employed by them?

Some conventional prescriptions

Fortunately for uncritical supporters of the conventional position a group of practical inquirers have addressed themselves to this question, and have come up with answers which appear to deal with the dilemma and so buttress the conventional wisdom. One sub-group of these inquirers have argued that the structure of large-scale organization can

be preserved and its advantages perpetuated without sacrifice of efficiency, and with an improvement in the quality of interpersonal relationships, if only managers will change their 'style'. 'Style' includes the way they handle their relationships with their subordinates. The argument is that to move from a style which stresses formal authority to one which stresses participation, which generates relationships of confidence and trust, and which encourages the civilized management of interpersonal conflict when it arises will help promote satisfaction. If we said that it is the aim of this school of thought to suffuse organizational relationships with concern, tolerance and understanding, on the hypothesis that there is no inevitable conflict between concern for efficiency and concern for people, we would not be distorting too much to their general position. In fact, it is confidently claimed by one author, Blake,[1] that the practical reconciliation of the two concerns is something that can be systematically learned. Others claim that the barriers of personal and professional defensiveness that characterize large departmentalized organizations can be overcome by altering the form and content of the interrelationships involved in planning and problem-solving, in ways that generate openness and the free giving of competence and commitment to shared objectives.

As for the problem of superior-subordinate relationships, the suggestion is that if bosses treat people as potentially capable of not only liking work but also of committing themselves wholeheartedly and creatively to it, and if they consult them, actively involve them and encourage them to develop themselves, then, however constraining the job itself might be, however large the organization or elaborate its procedures, an increase in satisfaction in work is likely to accrue. This is the logic behind suggestion schemes, Scanlon plans, and profit sharing, for example, and the idea of the John Lewis partnership.

In so far as low morale is thought to derive from the lack of challenge in the jobs that have to be done in organizations, producing boredom and dissatisfaction, the remedy is seen in designing variety and challenge in the job. Job-enrichment and job-enlargement express the idea that satisfaction with work will be enhanced if:

(*a*) Jobs are re-designed so as to offer a greater challenge to the ingenuity and skill of the incumbent, perhaps by combining several smaller jobs into one, or building-in more discretion and responsibility.

(*b*) People are moved from job to job, so as to give them variety of experiences, each of which calls for different competences.

The attraction of these two expedients is that they seem to offer the benefits of size without its disadvantages. There seems no reason why in the conventional wisdom, given ingenious job design, one cannot have the benefits of both size and advanced technology without a sacrifice of jobs which offer intrinsic rewards. (This assumption is particularly open to question.)

The essence of the conventional wisdom, as I understand it, is that it is a neat amalgam of two thought modes, one sociologic/economic and the other psychological. There is also (as ever) a moral component. The socio-economic argument is that certain principles of organization structure are generally consistent with high economic performance, i.e. the chain of command, line-staff, the hierarchical structure of management (command and control). The psychological argument is that you can, without sacrifice of the benefit conferred by that structure, design jobs so that they offer individuals the satisfaction they are supposed to need in work. The mistake of earlier wisdoms was to imagine that the authority structure and the technology close up the options. It is now increasingly realized that many technologies offer wide opportunities for job re-design (individual jobs and job relations), in ways which do not threaten organizational efficiency. There are so many alternative ways of stating the *job requirements* in these technologies (i.e. what is formally demanded of the job incumbent), that it should be possible, given careful thought, to balance those requirements with the *job expectations* (i.e. what the incumbent demands of a job); in which case perhaps morale might improve. It might also be possible, within an authority structure, for bosses to give their subordinates a chance to exercise greater discretion to take part in decision-making and, generally, to participate much more in the management of the whole organization.

Critique of the conventional wisdom

There are many ways that one could debunk the conventional wisdom: logical criticism, exposure of definitional woolliness, or demonstration of lack of factual support. I shall limit my criticism to making positive points which indicate the nature of an alternative to the conventional wisdom, such as:

(1) Size (in terms of numbers employed) is not *necessarily* connected with high differentiation of function. Small units may be very complex and in that case high differentiation and interdependence probably arise from the nature of the product, e.g. the assembly of complex products from bits and pieces, or the number of product lines. Units with such characteristics, however large or small, can generate industrial relations problems.

(2) Growth in size may take place additively in which case no additional problems of management arise. The units being added in this case are similar and problems of co-ordination are not, therefore, oppressive. Problems of management begin to arise when units are dissimilar. It is the *nature of growth* that is the problem not size of itself.

(3) Problems of management tend to arise at certain points on the growth curve of an organization especially, as it often is, when growth is associated with product and technical innovation. The general argument is that some points on the growth scale of

numbers may be significant when associated with other factors, such as geographical dispersion, the structure of competition and the growing complexity of technology.

(4) Some effects that are characterized as effects of size may, in fact, arise from changes in product strategy. Two fairly recent studies suggest a process whereby, in certain conditions of the labour market, changes in product variety trigger off processes which result in high labour turnover. This is because the impact on the productive system, with a given reward system, upsets the effort/reward balance, and causes people (mostly young, short-service people) to seek employment elsewhere. The ensuing reduction in manpower aggravates the disturbance of the production system, and may weaken the product market position and probably encourage further differentiation. This vicious circle effect, which has been named by those who first plotted it in detail the 'regressive spiral', has been found in very small firms and very large ones. It can occur in organizations with highly developed personnel services, or organizations without them.

(5) Complexity of decision-making is not necessarily associated with size.

(6) Low morale may be associated with low performance and low turnover—depending on the age distribution of the work force. Older men are less likely to leave and are probably less productive.

(7) Nor is there any necessary connection between size and bureaucratic red-tape or impersonality in relationships. Bureaucratic defensiveness, departmentalism and formulation can emerge in small organizations, as well as in large ones.

Indeed, the classic study of the process of bureaucratization was carried out in a small unit of less than 300 employees. Certainly, some of the external influences that started the process in this case arose from the fact that the unit was part of a larger whole; but this was not by any means the only influence.

(8) There is no *necessary* dilemma between economies of economic scale and social, managerial and psychological diseconomies, although such dilemmas may arise under some conditions. Therefore, the search for *universal* explanations and remedies is misplaced.

(9) Impoverished job designs may be associated with high perceived satisfaction. Some recent studies have shown that older, long-service workers may express high satisfaction in their working situation, although their actual jobs are perceived by observers to be boring, monotonous or dirty, or all three.

I am led to the conclusion that it is not possible to propose general remedies. One is not usually faced with a general problem but with one of a host of particular problems each with its own characteristics. The remedy for the problem is contingent on the circumstances of the case.

If this is so then we must now either abandon the whole matter as too complex or find ways of handling the complexities.

To sum up: the phenomenon of low morale and quality of relationships is not, in general, connected exclusively with one factor—whether it be size, technology, product market, union structure, labour market or locus of accountability; but it may arise when certain clusters or combinations of these are present.

An alternative approach

I hope I have said enough to show that a different approach to the problem of morale and staff relations is called for; an approach which uses such knowledge as exists as to the structure and functioning of organizations, to diagnose particular problem situations and from one's diagnosis, to implement changes and to monitor their outcomes. This approach rests on three propositions:

(1) The problem of morale and staff relations is a problem of organizational design.
(2) Organizational design consists of finding, and linking together, appropriate 'primary infrastructures' so as to offset the fissiparous tendencies which inhere the division of labour.
(3) To so design and link together is only possible if the precise nature of the fissiparous tendencies is identified in each particular case; hence the requirement for integrated primary infrastructures.

If all this sounds terribly stuffy and full of jargon, it is the use of necessary shorthand that makes it so. Let me, therefore, attempt to explain the jargon in plain words. I will then refer to some examples of recent research which support the three propositions.

When I refer to 'organizational design' I do not only mean grand designs worked out by grand persons sitting solemnly to allocate responsibility, authority or status, or to decide on 'policy'. Organization design is what happens anywhere in an organization when people start asking 'What shall we do now?'. They might be discussing how to improve the flow of paper through an office system, or the office system itself, or the supply of jigs and fixtures to the machine shop, or the control of VAT returns; or how to reduce claims for restoration of job differentials; or how to handle pay queries on Thursday nights; or whether to de-centralize into autonomous profit-centres; or what pay system would reduce the 'drift' of unit cost; and so on. Any conscious and deliberate act which seeks to influence the behaviour of human beings in an organization with the idea of maximizing some value or set of values (whether it be efficiency, effectiveness, job satisfaction or social responsibility, or whatever) is an act of organizational design.

All the activities just described occur in response to the emergence of a problem, i.e. when someone or some group perceives that certain cherished values are not being maximized and are concerned about it. Problems usually arise when some change in the environment of the

unit of diagnosis has generated a response which promotes one value, usually a value associated with a specialist group or category, at the expense of other values and other specialist groups or categories. This is partly what I am referring to when I use the term 'fissiparous tendencies'. The environment of modern organizations is subject to constant change. In some cases change may come unexpectedly. Organizations usually employ specialists to monitor and to respond to different segments of their environment; and problems arise from the heterogeneity and phasing of the responses when they impinge upon the integration of internal activities. In a word, decisions about what to make or what service to provide (a specialized response to the consumer/client environment) may be at odds with decisions about how to make it, etc., which are a specialized response to the technological environment (standardization reduces costs); and both may be at odds with the response to the labour market (which might specify certain constraints for the other decision-makers).

The primary infrastructures to which I referred earlier are the set of mechanisms that exist (emerge) to cope with these fissiparous tendencies. They are sometimes referred to as co-ordinating or control mechanisms, but to refer to them thus usually directs attention to such mechanisms as co-ordinating committees, project teams, liaison departments, formal authority structures, multi-discipline task forces, management by objectives, budgetary control systems, production schedules and control procedures; and away from such infrastructures as pay grading systems, incentive schemes, procedures for grievance handling and conflict resolution mechanisms, selection, training, and promotion procedures and the like, all of which are primary infrastructures in the definition I have given.

Problems of morale and staff relations arise when, due to the character of the organization's response to the environment, the links between primary infrastructures are weakened, and the organization 'comes apart'. The symptoms may be increased conflict ineffectively managed, lack of control, lower morale, deterioration of interpersonal relations, and so on.

To turn to proposition (3) above, it would seem to follow from the foregoing that the design of a linked system of primary infrastructures must rest on a detailed knowledge of the particular environment of the unit concerned, and the way it characteristically responds to that environment. There can surely be no one universal set of design prescriptions that will fit every case.

Contingency theory

Almost all the best recent work in organization analysis follows this contingent line of reasoning. Woodward, for example, advised us to take account of the influence of technology on organization structure, and suggested that high economic performance is contingent on a good fit between technology and structure.[2] The work of the Aston Group

qualifies this a good deal, suggesting that some parts of the structure (those near the scene of operations) are more affected by technology than other parts which may be affected more by the structure of the wider environment.[3] Some recent work shows size and structure to be related.

Amongst the most penetrating recent work is that of Lawrence and Lorsch.[4] They suggest a method for defining and measuring the requirement for integration, given knowledge of the environment of an organization and the way it is organized to respond to segments of that environment; from this it is possible to derive the requirements for integration (in my terminology the requirements for primary infrastructures and links between them).

In the work of the Organization Design Research Unit at Manchester Business School, procedures for the design of reward systems (particularly wage and salary structures and systems) have been evolved, which take into account both the character of significant sectors of the environment and the procedures for structure, specialized response and also the characteristics of other primary infrastructures, such as production control and other work-flow procedures, and the supervisory system.

I came recently across a practical example of contingent organization design, which was thought out and implemented by the senior management division of a large international group. This division differed in many ways from the other divisions in the group. Its product was much more complicated to manufacture, its technology more difficult to administer, its competitive situation much keener and more uncertain, and its relations with its customers much less highly formalized. However, this new division had inherited the management structure and procedures of the older divisions and found that the rather formal hierarchical and specialized division of labour did not work well. The main shortcoming was its incapacity to respond quickly to the unexpected, and as a result opportunities were missed and, where they were taken, the response tended to lack co-ordination. To overcome these shortcomings a 'matrix' type organization and a more open and active system of communication were introduced and the employment of Organization Development specialists was begun. The scepticism about the new-fangledness of these ideas has been much reduced by the performance record of the division. Wisely, the division is not trying to persuade the older divisions that they should adopt its new structure and style, but only to ask whether they have adapted their own structure to meet changing conditions.

These are just a few examples of a contingent approach to organizational design. I could elaborate them and introduce more but will not do so; instead I will conclude by addressing the question:

> If the conventional wisdom is so inadequate as a tool for diagnosis and action, how do we account for its persistence?

The *first* reason is that universal explanations and remedies make few demands on the intellect and the imagination, and are reassuring because they predicate an ordered, predictable and controllable world. The proposition 'Big organizations always have morale problems' is obviously simpler to state with conviction and a certain plausibility than 'Some big organizations have morale problems, some do not'. The latter requires that one asks not 'Why must big organizations be expected to have morale problems?', which is easy to answer, but 'What is it about those big organizations with few morale problems that differentiates them from those big organizations with a lot of morale problems?'. As soon as that question is asked demands are made on the intellect and the imagination, and the world becomes a more complex place, less ordered and predictable, and a little frightening. Organization top decision-makers are busy men, or at least imagine themselves to be so. Because the demands of their jobs encourage them to seek ways to reduce the variety of the real world to manageable proportions so that they can appear confident and decisive, they tend as practical men to favour terse, simple and universal explanations, and techniques based on them; and to eschew complex, messy and contingent ones from which it is difficult (but not impossible, and certainly worth the attempt) to derive precise prescriptions, given the inevitable (or imagined inevitable) constraints of time limitations.

Further, the motivation to question the validity of the universalist position is weak. Big organizations are news and big organizations in difficulties (especially industrial relations difficulties) are better news still. So the generalization 'Big organizations have morale problems' seems to be popularly supported and, since simple theories support simple remedies, and since one expects from the theory that morale problems will arise in large organizations, the appearance of symptoms is met economically by the appropriate general remedy—autonomous work units, theory Y management, management by objectives, job-enrichment, participative management, and so on. No wonder the vendors of universalistic remedies have had, and are still having, a field day.

The conventional wisdom also has another effect. It enables one to have a consistent 'line'. To have a consistent 'line' is psychologically comfortable to oneself; it also enables one's colleagues to 'fix' one in the theoretical and ideological universe, and that is comforting for them. And in societies like ours it enables one to gain approval for all the 'practical' values: simplicity, economy, decisiveness, and so on; and to escape the charge of being an 'intellectual' or an 'academic'. Since the world is complex, and since prescriptions based on the conventional wisdom might have unanticipated and unwanted consequences, one has the choice of learning from experience (which might entail abandoning the conventional wisdom), or finding an explanation which is consistent with holding on to the conventional wisdom. Since the unwanted consequence can usually be fairly convincingly laid at the

door of malevolent influences, the second course is usually taken. We learn neither from our failures nor our successes.

The eternal confusion of cause and correlation also favours the conventional wisdom. It is glib, but convincing to assume that if big organizations and morale problems are observed in some cases to go together that it is the bigness that is the sole cause of the morale problems. If one is conscious of the distinction between cause and correlation the fallacy is obvious. But, again, to raise questions about it leads one into complexities that one might want to avoid.

Despite the pressures which sustain the conventional wisdom, I am confident that its limitations are constantly being blatantly exposed by events. This has its dangers; it stops the self-confidence of those who hold to it and work with it. Therefore, some new doctrine is needed which can generate confidence, but which is a sharper and more flexible guide to action. The theory of the contingent nature of organization behaviour based on an open-system view of organization possesses these advantages. The practitioner who embraces this doctrine does not get a package of universalistic beliefs, but a kit of diagnostic questions to ask of any problem situation from which will follow suggestions for beneficial change, and for implementing it. It also has the merit that it allows learning to take place.

I have found in my own action research and consultancy work that this approach, once its full implications are grasped, can lead to great improvements in management practice, and enhanced confidence amongst managers. It will take time, but we shall eventually replace the conventional wisdom by a truly scientific management, i.e. a management whose practical art of organizational diagnosis and prescription rests on complex, systematically tested models of the behaviour and performance of organizations, and improves continually in consequence. We are slowly moving in this direction, and high time too; too much of our management is still on the moral and ideological plane, and many of our muddles and mishaps are, in my view, a direct consequence of that. The muddle about size and morale is just one example of what the conventional wisdom has to answer for.

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Operational Research in the Planning of Employment Services in Large Cities

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Introduction

The Department of Employment sought the assistance of Management Services (Operational Research) Division of the Civil Service Department in the design of new Employment Office networks, initially in London, and subsequently in Birmingham, Glasgow and Manchester. The studies were originally begun at the request of DE in connection with preliminary planning for the modernization of the Employment Service[1] and continued by the Employment Service management when it became a departmental agency.[2,3] The Employment Service Agency (ESA) is now a statutory agency under the control of the Manpower Services Commission.[4]

The declared aim of the Employment Service is 'to help people to choose, train for and get the right jobs, and employers to get the right people as soon as possible'.

To discharge its functions more effectively the ESA has a number of objectives for the 1970s, these include increasing the usage of the Employment Service by new categories of jobseekers—including those in employment and seeking a change of job, as well as those who are unemployed. Coupled with this is the objective of increasing the number of vacancies notified to the service by employers. Overall the effect will be a generally better service which will also benefit existing, mainly unemployed, users and make the Employment Service a more useful instrument of manpower policies.

To achieve these objectives it was recognized that one of the many changes needed was a new network of Employment Offices located so

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[1] *Future of the Employment Service*, Consultative Document, May 1970.
[2] *People and Jobs—a modern Employment Service*, HMSO.
[3] *Into Action—plan for a modern Employment Service*, HMSO, 1972.
[4] *Employment and Training Act 1973.*

as to encourage members of the public to use them, and based on areas corresponding to local labour markets. The planning also included the administrative and physical separation of employment and unemployment benefit work. An existing network of Employment Exchanges which provided both services under integrated management would therefore be replaced by separate networks of Employment Offices (or Jobcentres) and Unemployment Benefit Offices.

The location and siting of the Employment Exchange network, which had mainly been created in the 1930s, had been mostly influenced by proximity to unemployed claimants and unemployment benefit considerations. Although a number of new and attractive offices (in some of which the two functions were physically separated) had been provided in recent years, the location and condition of the majority of offices was not such as to encourage visits by those voluntarily seeking a change of job. In some cases, too, the existing network was not so located as best to serve the needs of the unemployed because of significant movements in population and employment.

There were, therefore, questions of individual location and of deciding the number of Employment Offices to be placed within a given area. It was generally appreciated in the Employment Service that existing locational patterns resulted in most of the major conurbations being under-supplied with offices. If the density of offices in an area could be increased the shorter the average distance the jobseekers would have to travel. On the other hand the cost of providing the service might increase disproportionately with an increase in the number of offices if there were economies of scale related to office size.

Feasibility study

It was against this background therefore of a thorough internal review of the Employment Service that DE requested the assistance of an OR team from the Civil Service Department to carry out a feasibility study for the construction of a model of the location of Employment Offices in Greater London. A joint DE/CSD study team was set up to report within six months.

In addition to the construction of a location model, the team was required to determine relevant factors and relationships underlying the Employment Service and to estimate the costs of operation of any proposed network of offices. The model, too, had to be constructed so that the effect of choosing different operational policies could be tested.

At the time of the study Greater London contained some 60 Employment Offices, all but a few of which dealt with all occupations except the Professional and Executive categories (for which there is a more centralized service). In some parts such as Central London there are clearly concentrations of particular occupations. One feature of London in addition to its size also affected the study. Whilst London is one of the world's largest labour markets with complex travel-to-work patterns, it was found that the Thames and river Lea created travel

barriers. It was, therefore, possible to limit the feasibility study to the area of north-east London, which statistical tests showed not to be untypical of London as a whole with respect to important employment characteristics. The area chosen contained the Boroughs of Barking, Newham, Waltham, Havering and Redbridge. Most Employment Exchanges in the area had (as is fairly general) been located near residential areas of relatively high unemployment because this produced concentrations of demand for a network of offices providing both employment and unemployment benefit services.

The first task of the team was to consider the reaction of potential and existing users of the Employment Service to changed office locations. Would users increase or decrease, and by how much? An attitude survey would have been a natural way to begin an investigation, but time did not permit. Instead an attempt was made to deduce potential user behaviour by discovering how people had been influenced in the past in the use of employment offices by their distance from them—distance from home in the case of the unemployed and from either home or place of work in the case of those in employment.

The only data readily available in a suitable form was a breakdown[1] of the 1966 population census into traffic zones[2] and registers of current users of each Employment Office. It was, however, possible to deduce satisfactory results by plotting the proportion of the working population using a given Employment Office against the distance travelled. Whilst a high proportion of existing unemployed users are 'tied' to Employment Office locations by the need to register for employment as a consequence of claiming unemployment benefit, it was found that increasing distance from an Employment Office rapidly deters use by jobseekers who are already in employment. In the case of one office where the proportion of employed users was plotted, for each half kilometre band around it the highest proportion travelled no more than a half-kilometre to the office. In other cases the distance travelled was as much as two kilometres but thereafter the proportion of the employed population apparently willing to use the office dropped sharply. It was also found that the overwhelming percentage of users of employment offices went to their nearest one. The lesson from these behavioural studies was that in order to attract people seeking a change of job, small catchment areas are necessary—and by implication a denser network of offices on the ground. These findings have been confirmed by subsequent studies in other cities.

The second major heading under which information was required was that of operating the Employment Service, in particular it was necessary to take into account only those costs which would vary with change of location and the number and size of offices. It was, therefore,

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[1] Made available to the team by the Planning and Transportation Department of the Greater London Council.

[2] A traffic zone approximates in size to an electoral ward.

proper to exclude some overhead costs such as those of Headquarters and Regional administration. The principal relevant variable costs were found to be those of local staff and accommodation. It was possible to obtain satisfactory figures of staff costs and to assess staff employed on employment work in the relevant offices from the DE staff assessment system. An apportionment had to be made of common service staff costs within the local offices. There were difficulties in practice in obtaining some accommodation costs and also of assessing the cost of changes due to location because of some notional and historically low rentals. This problem was resolved by obtaining local estimates of current rents per square foot for similar premises and applying these estimates to the occupied floor areas in the existing and newly located offices.

What had to be determined was how these costs varied with the number of users of an office, this number having been found to be the best simple measure of output. In fact both relationships were found to be linear, i.e. the costs increased proportionately to increases in numbers of users served. In the case of staff costs, however, there was a discontinuity in the relationship with the number of users which produced diseconomies of scale in small offices. The discontinuity was caused by the fact that it is generally only possible to employ whole numbers of staff. If, for example, two and a half staff would theoretically be adequate to deal with all work in an office, the number in practice might have to be rounded up to three. This would imply in this example a 20 per cent addition to staff costs. Similar disproportionate allowances had to be made for sickness and peak work demands in small offices.

Given this data it was possible to construct a model, described in the next section, which would either calculate the location and size of the number of employment offices to attract the maximum number of people seeking employment, subject of course to restrictions on the available resources of staff and money, or on the other hand evaluate specified networks in terms of these factors. The model could also be used to choose locations which minimized the distances to be travelled by any specified section of the population visiting these same offices.

The ending of the feasibility study was followed closely by the setting up of the Employment Service of DE as a departmental agency. One of the first acts of the new Agency was to accelerate plans for creating new networks of employment offices. It was decided that the location model developed for north-east London would be able to assist in this task in the major conurbations. Work began under the aegis of an Employment Service Agency Working Party in April 1972.

The location model

The mathematical model developed in the course of the feasibility study is most easily described in terms of the computer program in which it was embodied. This program is capable of being used in two versions

as indicated above; first as an optimization program to search for the most suitable locations for a given number of offices within an area, and second as an evaluation program to produce estimates of the usage, staff, accommodation needs and resulting costs which would follow from a specified allocation of offices. In order to use the program the study area is represented by a set of zones; in the four studies completed so far traffic zones were used which had previously been compiled for the purposes of transportation studies. The following data were compiled for each traffic zone from national census results:

(*a*) The number of people working in the zone.
(*b*) The number of economically active people resident in the zone.
(*c*) The number of unemployed people resident in the zone.

The registered unemployed were also allocated to traffic zones by sampling addresses from Employment Office registers. In addition the program uses the grid co-ordinates of the centroid of each zone as a basis for estimating distances.

The first stage in the execution of the program in its optimization version is to compile an initial allocation of a specified number of employment offices, one to each of a number of different zones in the relevant areas. An office can be located in a zone initially and be regarded as fixed in that zone irrespective of any subsequent reallocation of other offices during the execution of the program, or an office can be located in a zone as a trial site but may be moved to an alternative site should it prove advantageous to do so. It is also possible to prevent the program from allocating offices to zones where the allocation would be undesirable or impracticable. Having made the initial allocation of offices to separate zones the program examines each of the remaining zones and determines its nearest office. In this way zones are grouped together into possible catchment areas, each containing one office and its associated zones. It is possible for a catchment area to consist solely of a zone containing an office. Each catchment area is then examined in turn in order to test whether locating the office in an alternative zone would increase the numbers of users. This process is repeated until all the catchment areas have been considered and a new allocation is made of offices to the zones giving the maximum number of users.

The next stage is to determine the nearest office for each zone again and to regroup the zones into new catchment areas. The catchment areas are then reviewed on a zone by zone basis as above.

The process of grouping the zones into catchment areas and analysing them is repeated until the set of zones containing offices is the same after two successive cycles. An optimum is now assumed to have been reached.

In its evaluation version, the program does not perform any allocation of offices to zones; this information is input to the program. The function of the program is to estimate the usage of each office in the

specified network in terms of the numbers of registrations from employed persons, the staff and accommodation requirements and consequent costs. The program also calculates measures of inconvenience for unemployed persons who would use the network of offices; for example, the percentage of unemployed users who live farther than three miles from their nearest office.

Before the program is used, either to find an optimal allocation of a number of offices in an area or to evaluate a specified network, it is necessary to obtain realistic estimates of a number of factors used in the program to assess usage, staff needs, accommodation and costs. Some of these factors are determined independently of the model, for example, the parameters describing the relationships between total staff and number in individual grades and the relationship between staff and floor space occupied. Other factors, however, can be determined only by means of a comparison between known usage of existing offices and the usage estimated by the program. The evaluation version of the program is first applied to a network of existing offices using trial values of these factors. From the comparison modified values of these factors are developed and then checked in a further run. In this way the program is calibrated to produce results which reflect the 'real life' situation.

The program is relatively short but makes use of a considerable amount of population data on a zonal basis. For ease of access it was decided to implement the program on a time-sharing computer via a terminal; the data being input directly by the computer bureau concerned. Experience has shown that this method of using a computer is particularly convenient for this type of work, especially when a number of alternative networks have to be evaluated at short notice. Without this immediate access to the program the OR team's contribution to the planning process would have been less effective.

Applications of the model

The model has been used to examine the present and planned locations of employment offices in four conurbations: London, Birmingham, Glasgow and Manchester. This work was carried out as part of the development by the then regional controllers of network plans for their areas. In this way the OR team were able to provide regional staff with assistance on the demographic aspects and the staffing and cost implications of their plans, while forecasting the numbers of jobseekers likely to be attracted to the offices.

As indicated above the first stage of the analysis in each of the four conurbations was to calibrate the location model by using it to estimate the current usage of employment offices from the demographic data and behavioural studies described earlier. These estimates were compared with actual usage, expressed in terms of the numbers of registrations at each office. By adjusting the proportion of the relevant economically active population who had been assumed to be using the

service, satisfactory estimates of the current situation were obtained. The model, having been adjusted in this way, was then used to examine various aspects of the plans under consideration by the Working Party.

London

In order to test the hypothesis that the Greater London area was underprovided with employment offices the model was used to investigate the likely effects of operating alternative networks of between 80 and 160 offices. The results of this analysis confirmed that the more offices there are in London the greater the likely average cost per registration, in spite of the increased number of registrants which a larger network would almost certainly attract. Another effect of increasing the number of offices in an area is to decrease the average size of office (in spite of the overall increase in the number of registrants) resulting in some parts of the study area, in a considerable number of very small offices, needing only two or three staff. Such offices could be difficult to administer and might give rise to management problems. These considerations led to the conclusion that the network for the Greater London area should contain between 90 and 110 employment offices, excluding Central London and specialist offices. The number of relevant offices specified in the plan previously drawn up by the regional office was 104.

The optimization version of the program was used to produce the theoretically ideal network for London. The evaluation version was then used to provide estimates of numbers of registrations of employed and unemployed persons, numbers of employment staff required and operating costs for the following networks:

1. The current network of 58 employment offices.
2. The network plan proposed by the regional office.
3. The network produced by the optimization model.

This analysis showed that both the proposed networks 2 and 3 would attract more employed registrants, would require more staff, would cost more to operate and would be more convenient for unemployed persons than the current network 1. The network produced by the optimization model 3 would probably attract 2 per cent more registrants from employed persons than the planned network 2, although the two networks would involve the same number of staff and would cost more or less the same to operate. The model also indicated that these two networks were equally convenient from the point of view of unemployed registrants.

In order to realize the potential increase in registrants, some modifications to network plan 2 were accepted by the Regional Office.

Birmingham

As in Greater London, the resident population of Birmingham is dispersed throughout the conurbation and tends to be clustered around a

number of separate centres. An indication of the inadequacy of the current network in Birmingham was to be found in the fact that the number of offices was less than the number of identifiable centres of population. The optimization version of the location program was used to investigate the effects of operating networks of between 15 and 35 offices in order to determine the most appropriate number. The results showed that the total number of users attracted to the service would probably increase fairly steeply and consistently as the number of offices provided increased from 15 (the current number of offices in the area under investigation) to 25. Increasing the number of offices beyond 25 would result in a much lower rate of increase in usage. This analysis confirmed that the population in the study area was more or less concentrated on 25 centres and that the number represented the most appropriate number of offices for the new network. Independently of this work the regional office had decided on a network of 25 offices as a basis for their plan. In fact the allocation of offices to zones devised by the optimization program and the plans prepared by the regional office were found to be not significantly different.

Glasgow

With the highest population density of the four conurbations studied, coupled with persistently high unemployment, the Glasgow area presented a considerable challenge to the development of a new, improved employment service. Most of the buildings which currently housed employment offices were old and unsightly and significant population movements had taken place during the preceding decade. After a validation check of the model had been completed along the lines previously described, the evaluation version of the program was used to investigate how the network plan proposed at that time by the DE Scottish Headquarters compared with the current network.

It was found that these original plans, which contained half the current number of offices, would, if implemented, have caused a contraction in the employment services in the area, albeit with a corresponding reduction in costs. The amount of travelling incurred by unemployed persons was calculated to be significantly higher than the current level. It was concluded from this analysis that although the proposed locations probably represented the best allocation of nine employment offices in the Glasgow area, an adequate employment service could not be operated with this number of offices. In view of this finding, the remaining part of the Glasgow study was devoted to evaluating alternative networks of up to 20 offices.

The Scottish Headquarters asked the OR team to evaluate 11 alternative network plans involving different numbers of offices and to compare their likely performance with the previously proposed network of nine offices and a network which had been previously produced by the optimization version of the location model.

The results of this evaluation were presented and after consideration

of the local authority development plans for certain areas it was agreed that one of the Scottish Headquarters plans should be adopted. This network consists of 15 offices, together with an enquiry office in central Glasgow and a specialist commercial office. The decision was influenced by the conclusion drawn from this analysis that a total of 15 offices appeared to be the minimum number to maintain the present standard of service in the Glasgow area. The agreed network implied an average working population per office which was 10 per cent higher than in the other conurbations but was considered to be acceptable in view of the compact nature of Glasgow compared with these other cities.

It was found necessary to make some adjustments to the catchment areas defined by the evaluation program in order to take account of local travelling patterns which were heavily influenced by the radial nature of nearly all Glasgow's main roads. Thereafter the evaluation version of the program was used to produce new estimates of usage, numbers of staff, flowspace requirements and costs.

Manchester

A distinctive feature of the Manchester conurbation was that nearly one-third of all registrations in the area took place at one office in central Manchester. This suggested inadequacies in the employment services in other parts of the conurbation and confirmed the overall impression that the current network was capable of improvement. In addition it was found that the catchment areas for existing offices tend to follow the previous local authority areas.

Repeated applications of the optimization version of the location program using numbers of offices ranging from five to thirty indicated that approximately two-thirds of employed jobseekers would probably use the service with a network of between 25 and 30 offices. It was deduced that a network of more than 30 offices would show a relatively small increase in the number of registrations.

The evaluation version of the program was then used to compare the network of 25 offices with the network plan prepared by the regional office and a similar plan which had been modified in the light of the results of the optimization work. Each of these three networks was found to require more or less the same number of staff and to have approximately the same operating costs. Although the network produced by the location program appeared to be capable of producing 5 per cent more registrations by employed persons some of the alternative sites proposed proved to be impossible and the potential increase was reduced to 1½ per cent. The OR team recommended that the Regional Office plans be amended by locating an office in an area of high unemployment at the expense of one of the offices planned for central Manchester. The recommendation was made in view of the program's estimate of a significant reduction in the distances travelled by unemployed persons. The results of the program showed that this amendment would not significantly affect the overall usage of the network by

employed jobseekers. The recommendation is currently being considered relative to more up-to-date information about population changes.

Results

The Employment Service Agency concluded[1] that Operational Research supplementing the planning and analysis by their regional offices had demonstrated that in major centres of population existing employment offices were not well located and were on average too large. The Agency decided, therefore, to have more smaller and better distributed offices and in fact approximately to double the number of offices in two conurbations. What then was the distinctive contribution of Operational Research to this decision-making process? This contribution has taken two forms. First, by means of the model some improvements were made, notably in Glasgow, to plans prepared by conventional methods. These improvements were only possible by having in a model the capacity to evaluate many alternatives. Thus the study identified the particular contribution to the Employment Service's objective of attracting more employed jobseekers that office location could make as distinct from all other proposed marketing activities. The magnitude of this increase in employed jobseekers varied from conurbation to conurbation in the range 2 to 26 per cent. In fact, although the model constructed bore the title 'location', the benefit from using it has not been so much in terms of choosing one particular set of locations rather than another, or in terms of seeking an optimal set. Rather it has been the choice of the number of offices to be placed in a defined area which has been important and the ability that the model has to evaluate alternatives. Management has been given a means of measuring the effects of choosing a particular network and quickly repeating these calculations as networks are developed whenever a fresh trend in the employment situation becomes apparent, and in any event when plans are reviewed. These measurements are in terms of predictions of numbers of people who will use a given office network—predictions of the market—and estimates of the effects of staffing and of the relative costs of the operation as a whole. Moreover, although it was found that other clerically based techniques are adequate in designing networks in smaller labour markets, the feasibility study led, as a by-product, to greater management understanding of the behavioural and cost factors involved which were also useful to the ESA in its general locational and market planning. The more traditional type of location model found in OR literature can also be used to calculate costs, for example, the cost of networks of warehouses, but there the similarity ends, for the objective of the usual model is most often to minimize the cost of transporting a given amount of goods to a fixed set of customers. In the present study location has been used as a positive tool in management's hands, both to encourage new users

[1] In *Into Action—plan for a modern Employment Service*, HMSO, 1972.

of the Employment Service and to improve the circumstances of its use by the unemployed.

Secondly, it might perhaps also be said that this study has made some contribution to the planning process in government. Traditionally, if a complex problem arises, a working party may be set up to solve it. After due deliberation they will usually produce a single plan. This will be debated thereafter by higher authority and either accepted or rejected. In this case regional managers and the Employment Service Working Party were enabled through the use of an OR model to consider a large number of alternatives for each major centre of population and choose one that was agreed to be most suitable. Apart from its own judgment based upon its collective experience, the Working Party also had an identical set of measures for comparing each plan and coming to a conclusion.

There are a number of other locational problems in the public sector which are susceptible to a similar approach. The location of offices for the claiming of unemployment benefit can be considered by a natural extension of the work described here and a revised model has been developed and used by the same team. A similar problem which is being tackled (by the Training Services Agency) is that of locating skill-centres. Here the distances to be travelled by potential trainees are one of the important factors. In general, models of the type described in this article are applicable in large centres of population wherever offices are frequently visited by the general public and where poor location can either deter visits which management desire to attract or result in unacceptable travelling burdens being placed upon those people who must visit offices for statutory purposes.

Internal Audit in the Service of Management

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Three years ago an article in the *O & M Bulletin*[1] drew attention to the 'quiet revolution' taking place in internal audit within the Civil Service. More recently readers of this journal will have read of developments in the Ministry of Defence[2] and the growing importance of internal audit in the Property Services Agency.[3]

[1] *Better Audit, with Less Routine Checking—a Means of Saving* by A. M. Parsons and R. R. Pittam, *O & M Bulletin*. November 1971.

[2] *Management Audit in Defence* by A. D. Scott, May 1973.

[3] *The Commercial Approach to Government Operations* by J. G. Cuckney, August 1974.

Generally, internal audit has been developing steadily from its traditional role of verifying the accuracy of accounting transactions to its modern more positive function as a service to management. Inevitably, in a federation as large and heterogeneous as the British Civil Service, the rate of change is varied and the form that it takes differs between departments. However, there are two major features which distinguish the more modern internal audit. These are the nature of the audit and its place within the organization.

The widening scope of the audit role in many departments has meant an end to much of the routine involved in the auditor's work of former days. The internal auditor is now likely to have a much more varied and interesting work experience than before. The range of activity and the demanding quality of work required are reflected in the generally higher grading levels being introduced within many audit sections. Auditors are increasingly concerned with assuring their Accounting Officers that value for money is being received and that decisions are based upon sound information. Auditors may, for example, sit upon policy committees where their wide knowledge of departmental activities may enable them to suggest means of making substantial savings for the taxpayer.

All this does not mean that the auditor is no longer concerned with propriety and the accuracy of accounts; it does indicate that he has wide tasks to perform in addition to satisfying himself that fraud and error will not remain undetected for long. The modern auditor should be an expert in control systems and his activities should be aimed at helping in the improvement of decision-making processes.

A radical extension in the scope of internal audit is not possible if organizationally it does not have an adequate status with a high degree of independence. Achievement of this level of independence often involves movement from a subordinate position within the Accounts Division to one answerable directly to top management. In practice this means that the Head of Internal Audit is likely to be an experienced senior officer reporting directly to the Principal Finance Officer. Not infrequently, nowadays, Accounting Officers like to hear from their chief internal auditor at first hand. Certainly, the personal support of a Permanent Secretary or Chief Executive is a major factor in establishing the value of audit to management at all levels in a department.

A significant change in the nature of internal audit also requires changes in attitude and in auditing techniques. The confidence and respect of line managers must be earned if the audit function is to attain general recognition as a service to management. Clearly, the traditional relationships between auditor and auditee have had to alter. The auditor needs to understand the manager's problems: to be a good manager, himself. The confidence of line management and staff has to be won without the auditor losing his ability to be a watchdog as well as an adviser.

Audit techniques are evolving rapidly. Today's internal auditor spends far less time checking masses of transactions. However, no auditor can escape the need for some checking as a means of discharging his primary role of appraising the systems installed by management. He is particularly concerned with establishing that line management is carrying out its responsibilities properly in ensuring the efficiency and effectiveness of a system as well as compliance with it.

Although attention has been drawn to the auditor's role as an expert on control systems it should be emphasized that it is not the auditor's function to install sound systems of control. Nevertheless, it is clearly in the interest of the manager to consult the auditor when a system is being designed or about to be changed. This consultation is of paramount importance where EDP systems are being introduced and serious losses may ensue if the auditor is excluded from consideration at the earliest stages. There is also a need for the auditor to liaise with other services to management and his review will often indicate areas where the attention of O & M and other disciplines would be beneficial.

The modern approach to audit is set out in the CSD booklet *Internal Audit in the Civil Service* which has been widely read both within and outside the Civil Service and has undoubtedly played a useful role in helping to stimulate improvement in audit methods.

The 'quiet revolution' has also been greatly assisted by a substantial training programme. The Civil Service College has now completed its ninth audit training course with the help of a firm of consultants and there are plans to extend the scope of future training. These courses which included some extremely able speakers from outside the Civil Service have been very successful (though, naturally, there has been some criticism) and they have undoubtedly made a contribution to the improving standard of internal audit in many departments. Training has also been given at Kingston Polytechnic in the audit of computer-based systems.

To follow the internal audit seminar for Principal Finance Officers,[4] a seminar was held at the end of last year for Heads of Internal Audit. Much work is presently being done within the Central Computer Agency on computer audit techniques and there is shortly to be a conference for computer auditors at the Civil Service College.

This centralized training has often been effectively supplemented by departmental training courses in particular aspects of audit work as well as regular audit conferences. Many departments send their auditors on internal and external courses in other subjects which are of value to them.

It is confidently expected that the future will see departments increasingly benefiting from the contribution made by internal audit as the standards already set by the front runners are achieved by the

[4] *Internal Audit Seminar* by A. M. Parsons and R. R. Pittam, *O & M Bulletin*, May 1972.

others. We shall probably see more professional accountants in internal audit which will be seen to be a good area for potential senior managers of the future to gain a wide experience of their department.

The Institute of Internal Auditors had as its theme in 1973–74 'Horizons Unlimited'. In the Civil Service we can at least say 'Horizon Widening'.

Development of the Civil Service Catering Organization

H. A. GUEST

Mr. Guest is Chief Executive of the Civil Service Catering Organization. He is a caterer with a strong management consultancy interest, and had wide experience in commercial catering before joining the Civil Service. In the article that follows, Mr. Guest expresses some personal views. —*Editor*

Background

The Civil Service Catering Organization (CISCO) was formed in April 1972 by the amalgamation of two existing government catering bodies: the CSD Directorate of Catering and the Treasury Catering Advisory Service. This union brought together two distinct forms of Civil Service catering for the first time—directly-run and committee-managed restaurants.

The directly-run operation of the Directorate of Catering had its roots in war-time catering and was responsible for feeding civilian workers in ordnance factories, dockyards and scientific establishments throughout Great Britain. The Directorate was responsible for the day-to-day running of over 250 establishments with 12 area catering managers located throughout the country and responsible to a Director based in London.

The Treasury Catering Advisory Service was formed in 1947 to give advice to the Treasury, the then Ministry of Works, other departments and committee-run staff restaurants throughout the country. In 1972 there were about 600 such restaurants, and there were five advisers responsible to a Chief Catering Adviser operating nationally but based in London. They acted in an advisory capacity having no direct involvement in the management of catering units. Their work included planning the units and organizing the financial support provided in terms of grants and loans to committee-run catering units in every Government Department.

In April 1968 an official committee recommended that both the

directly-run and the committee-managed systems should continue, but under the aegis of a company limited by guarantee; the company would receive a grant in replacement of all subsidies in kind except accommodation (which would continue to be provided free). To facilitate the move towards a company the then separate Directorate of Catering and the Catering Advisory Service were brought together in the Civil Service Department from 1st April 1969.

However, it was later decided that the control and financing of catering should be studied in greater depth before proceeding further. Accordingly a management review was commissioned in mid-1970 with members drawn from CSD's Management Services Division and management consultants. Broadly, their report supported the findings of the Committee.

Departmental reactions to the report indicated, however, that there were problems in the development of a system of accountable management for Civil Service catering which did not admit of a quick solution. Pending the resolution of these problems, it was decided that the Civil Service Catering Organization should be set up within the Civil Service Department, and on 1st April 1972 CISCO was formed.

Aim of Civil Service catering

The aim of Civil Service catering, as defined in *Estacode*, is that staff generally should be able to obtain a good mid-day meal in pleasant surroundings at a reasonable price. In practice, however, the scope of the catering service is much wider than this narrow definition and encompasses the provision of main and light meals in restaurants and snack bars, and associated matters such as the sale of alcohol, tobacco and sundries, and of tea and coffee, etc. during morning and afternoon breaks. There is also a considerable demand for all types of special function catering and CISCO has provided a full catering service for open days in Ordnance Factories and, in particular, at the Farnborough Air Show. Total turnover of the direct and committee systems together exceeds £10 million per annum.

In the past the provision of staff restaurants has largely depended on the number of staff working in a building or group of buildings and the availability of alternative facilities in the area, which has resulted in a proliferation of outlets on a departmental basis. In retrospect, and with the current high cost of food and labour, this has created trading problems which are calling for a more comprehensive view of facilities.

CISCO structure

Essentially a trading organization, CISCO lends itself to a commercial-style management. The Chief Executive and the heads of the five functional branches form a management executive which is the equivalent of a board of directors and meets regularly to decide management strategy and methods of meeting defined objectives within general CSD policy directions.

The five members of the management executive are the Director of Operations, the Director of Sales and Marketing, the Director of Supplies and Services, the Director of Personnel and Administration, and the Chief Accountant. The various key responsibilities of each are set out below.

The Director of Operations has overall responsibility for production and sales of the 250 directly-run units, and for the provision of a catering service for some 70 units and installations in the Training Services Agency (TSA). He operates through a line management of 19 Regional Catering Officers (RCOs) each in charge of a geographical region covering the whole of Great Britain. Within each region the RCO is responsible for the day-to-day running of CISCO and TSA restaurants; he also has an advisory role in relation to committee-managed restaurants. The advisory role is a matter of particular interest, because not only does it concern itself with the planning layout and provision of catering premises, but also with the day-to-day contact and advice given to committee management in individual units. The direct line responsibility is carried out through catering managers who are graded in accordance with the level of responsibility they carry in each unit. Line management is thus responsible on a daily basis for the provision of the service, the production processes in the kitchen and the level of staffing needed to provide a service to the satisfaction of the establishments concerned.

The Director of Sales and Marketing carries out the main negotiations with CISCO's customers, whether they be other departments or the individual users of the staff restaurants, and with the Property Services Agency. Clearly, the provision of staff restaurants in accordance with *Estacode* has always gone on, and as such catering management has been represented at senior level when agreement was reached on the scale of restaurant facilities. However, there is now a much closer evaluation of the requirements of customers in any given set of circumstances so that the catering provision is made in accordance with the requirements of the market in premises which are up to satisfactory modern standards. Examples of this work are referred to later on.

The Director of Supplies and Services is concerned with the basic purchasing arrangements of the whole organization and makes arrangements with national suppliers over varying timetables for the supply of their products. Information on agreed buying prices is issued to all restaurants, and committee-managed units can take advantage of the negotiated prices. Advice is also given to RCOs on suitable short-life products such as greengroceries and meat, and as a result of this flexibility in negotiating prices, the current food cost index to CISCO has been held at over 10 per cent below the national indices. The Planning Section of the office of the Director of Supplies and Services provides detailed catering layouts of restaurants once they have been agreed by Sales and Marketing, and advice to PSA on catering requirements of a technical nature.

The Director of Personnel and Administration carries out the Civil Service function of an Establishment Officer and administers all management and much of the industrial work force in CISCO's restaurants. We have, however, tried to develop a positive approach to personnel management in order to overcome difficulties of the Civil Service personnel structure when applied to meet the requirements of a commercial organization. Although many statistics have been produced on the performance of various units it is becoming increasingly apparent that good quality management, suitably motivated, invariably produces the best results.

The Chief Accountant is responsible for forecasting and monitoring CISCO's performance. Day-to-day bill payment, book-keeping and the production of regular operating statements, previously performed locally and spread over a number of Votes, has now been centralized in a single CISCO Vote, and incorporated in the CSD computerized accounting and management information system described in the August 1974 edition of this journal. Periodic operating statements covering four- or five-week periods are provided by CSD Finance Division, and appropriately summarized for all levels of management. Other statistical returns cover the number of meals served, space occupied and staff in post. Much of this information is converted into graphs showing trends in restaurant usage, turnover, costs, etc, and also into statistical yardsticks providing comparisons of individual restaurant performance in terms of turnover, gross profit margins, etc. Other productivity indices cover cash takings and meals served per head of staff and in relation to space occupied. These yardsticks do not by themselves provide answers, but they do identify problems needing the close attention of RCOs and/or CISCO Accounts Branch. There are, of course, problems in attempting to compare CISCO performance with that of similar commercial organizations; for example, CISCO cannot follow local wage trends for the catering industry but has to apply the nationally negotiated rates of pay for Civil Service industrial and non-industrial grades, and the capital programme has frequently to take account of national policy for government expenditure of this kind rather than purely trading considerations.

Increase in usage of restaurants

It is interesting to note that a decline in usage of Civil Service restaurants has been reversed for the first time during the last year. This increased usage applies to all facilities offered and there has been an increase in cash takings both on food and sundries. After allowing for price increases the net increase is still 11 per cent and some of the actions taken by CISCO have undoubtedly exploited the current trend towards higher usage due to rising cost of food bought in retail shops. Caterers have traditionally been concerned with their production processes and paid little attention to the presentation and marketing of their food. One of the key factors here is the decor and atmosphere of the

catering unit; and in the number of units which were modernized to include a comprehensive presentation of the dining areas even more significant increases in turnover have been achieved. Analysis has shown that this is due in particular to an increase in the number of customers using these restaurants and also significantly due to an increase in the spending power of all customers. A detailed check was carried out at the first of the major modernizations at the Foreign and Commonwealth Office (FCO), where a grim and miserable basement was converted into a rather charming restaurant and bar. Turnover there was increased by between 35 and 40 per cent, of which about 25 per cent was due to extra customers and the remainder due to increases in spending power. In addition, the whole trading picture of the restaurant has been much more satisfactory because the increased cash gross profit has kept pace with the rising cost of food and labour. Other results of a similar nature have been experienced in modernizations at the Adelphi and the Old Admiralty Building in London, and the new staff restaurants in Portsmouth and Rosyth. Some tentative conclusions can be drawn from this which indicate that a pleasant redecoration in a style comparable with commercial restaurants will increase business by between 10 and 15 per cent, and a major modernization fully designed to meet the requirements of the market and including a bar will give an increase of FCO dimensions, i.e. between 35 and 40 per cent. The consequent improvement in trading results does lead to a significant saving in public funds.

In order to establish the requirements of the market a number of pilot schemes and a full market survey have been conducted. A computer program has been designed to help with the analysis of the results and has provided some helpful pointers towards requirements of the market arising from a questionnaire at the Ministry of Agriculture, Fisheries and Food at Guildford. Similar techniques are being applied in other restaurants when the opportunity offers. Having determined the right level of the market, a whole series of selling campaigns designed mainly to increase the awareness of the general CISCO customers of the facilities of the staff restaurants has been introduced experimentally. These include a cheese presentation in conjunction with the Milk Marketing Board, and a potato presentation. A number of 'European Weeks' have been planned to present original dishes; and a poster campaign which will build up over a period of weeks an awareness of the full range of facilities the staff restaurant can offer is being introduced.

The problems ahead

The most difficult problem that faces CISCO during the next year is to be able to implement, at a reasonable rate and with commercial considerations in mind, the many ideas that have proved themselves experimentally. The original recommendation that CISCO should operate independently as a 'hived off' limited company has not been

put into effect for a number of reasons. Where restaurants are accommodated in part of an office building, there would be the greatest difficulty in arriving at a fair and proper charge to the company for the value of their premises and of services supplied to them. Also, there would be problems arising from the identification of the welfare element for the purposes of subsidy policy. But even with the present organization, improved commercial performance must, to a large extent, depend on the degree to which capital can be made available for modernization and redesigning of catering units to meet the requirements of the market: there is some evidence, albeit tentative, to show that a properly designed unit leads to a reduction in running costs, although within the Vote structure there is at present no way of relating this reduction in trading fund expenditure to possible capital expenditure in a building programme. The Property Services Agency has been immensely helpful in meeting CISCO's suggestions on the modernization of units, but they themselves have been under serious expenditure constraints during the formative two years of CISCO and are trying to find an answer to the problems of the time-scale of building work as it affects catering units. One of the problems is that trading assessments made to justify capital expenditure have become invalid by the time the money is made available either because the user department has changed its requirements or the catering assumptions have ceased to be applicable. There is no doubt that the relatively slow time cycle in the building of government premises is a most serious drawback in trying to make commercial judgments and much thought is being given to finding an answer which will keep commercial responsibility with CISCO management and yet will meet the safeguards and constraints of capital expenditure within the present somewhat stately time-scale.

Conclusion

CISCO is confident that civil servants will react to the presentation of good food in pleasant surroundings, nicely served. They will make more use of their staff restaurant if it approximates to the surroundings of the commercial restaurants which they use outside their work. They will respond to the changes in eating habits in the population and CISCO has developed techniques of management, and above all market assessment, which will enable it to meet the requirements of its customers. The most interesting and difficult problem remains in reconciling the different claims of a commercial-style management reacting immediately to customers' requirements with the constraint both in terms of capital expenditure and time-scale due to the normal processes of a different Government Department responsible for its own funds with different yardsticks of control and procedures.

The Working Environment in Government Offices

J. A. HIRST, Working Environment Joint Unit

Introduction

Furnished office accommodation for the Home Civil departments, for Ministry of Defence Headquarters and for the Foreign and Commonwealth Office is provided by the Property Services Agency (PSA) as a 'common-user' office estate, free of charge to its occupants. It is the PSA's concern to provide, within the limits of allocated funds, accommodation which is adaptable to a wide range of departmental operations and which provides acceptable working conditions for their staffs.

The Civil Service Department (CSD) also has a major interest in accommodation matters. Its responsibilities for the overall efficiency of the Government machine, for conditions of service, personnel management and welfare questions, and for central consultation on these matters with departmental managements (through Establishment Officers) and staffs (through the National Whitley Council) also generate a concern for the suitability and acceptability of Government offices.

The Working Environment Joint Unit (WEJU)

The two departments recognize their common interests and, during the last two or three years, their developing liaison has been strengthened by improved machinery for inter-departmental and Staff Side consultation in accommodation matters. A little over a year ago they decided to form closer links and shorten lines of communication by forming a single unit, responsible jointly to the two departments for formulating policy and co-ordinating action related to the working environment in Government offices. The WEJU is headed by a Senior Principal from the CSD and a Superintending Architect from the PSA; its Administration Group staff (12) is drawn from both departments, though, of necessity, its Professional and Technology Group staff (3) comes only from the PSA. It is located in the same building as the relevant PSA Directorate (the Directorate of Home Estate Management) but maintains good communications with the CSD through private network telephone and facsimile links.

Office Accommodation Standards

The concept of a 'common-user' office estate, provided by a central Agency as a common service, implies standardization of what is provided. This is part of the economy of common provision and is also implied in the idea of a unitary Civil Service, with common conditions of service in all departments.

In theory, offices of a uniform quality are produced by making each of a number of separate features the subject of an Office Accommodation Standard (OAS). An OAS may prescribe a scale of provision (e.g. space, lavatories), a level of performance either to be achieved or not exceeded (e.g. temperature, noise), or a particular article (e.g. low-loop nylon carpet).

The WEJU is responsible for initiating or examining proposals for new or revised OASs and for ensuring that the PSA, the CSD, the Treasury, departmental clients and the National Staff Side are consulted about their feasibility, cost, suitability and acceptability. The expertise necessary for this work is mobilized through the Accommodation Standards Committee (ASC) for which the WEJU provides the Chairman and Secretariat, and which has a wide membership drawn from all parts of the PSA, the Building Research Establishment and other departments as necessary. The basic work of the ASC is done in a number of small working parties, each concerned with one subject or with a small group of closely related subjects. Current working parties are concerned with space allocations; heating, ventilation and air-conditioning; intrusive noise; solar gain; lighting; sign-posting; storage facilities for furniture and equipment storage and disposal facilities for wastepaper; and with the overall provisions made for disabled persons, for messengers and for recreation.

In practice it is seldom possible to apply OASs universally and completely. They are, of course, applied to the design of new Crown buildings, but OASs applying at the design stage of a building are almost certain to be reviewed during its working life. Where it is necessary to lease a building—and more than half the office estate is leased—it is often impossible to find one in which OASs can be fully implemented and some compromise is necessary. These buildings are also, like Crown buildings, subject to gradual obsolescence.

Clearly, if the office estate is to be kept up to date, the production of new or revised OASs must involve programmes for their application to the existing stock of buildings as well as to new construction and acquisitions—or the consideration of disposal when modernization ceases to be effective. Unfortunately, for various reasons, this policy has not been consistently pursued in the past and there are now substantial numbers of office buildings which fall unacceptably short of present OASs. The current problem is thus not only to apply new OASs as they arise, but to bring a substantial part of the estate up to the common start line.

The Office Improvement Programme

The WEJU is developing an Office Improvement Programme (OIP) which is concerned both with identifying and correcting past failures to meet well-established OASs and with applying new and recently revised ones. Thus, while present work is concerned mainly with modernizing older buildings, plans are being made to introduce new

OASs concerned, for example, with intrusive traffic noise and solar gain which often affect newer buildings.

Operating in parallel with the OIP is a plan for introducing certain new features developed by the PSA's Supplies Division. Soft floor coverings will gradually replace linoleum; stretch fabrics in coloured designs will be used for chair covers instead of grey plastic; and the grey of filing cabinets and other storage furniture will be replaced by a range of three complementary colours. The introduction of these features will also be part of an integrated concept of colour design applied to interior decorations which, following a series of trials, will shortly become standard practice in Government offices. All these features will be introduced as buildings become due for redecoration in the ordinary way or on completion of work done as part of the OIP.

The greatest difficulty in formulating the OIP lies in the great diversity of our office buildings, many of which are adaptations of buildings originally intended for quite different purposes. This means that virtually every one of our 7,000 or so office buildings must be examined and treated individually. With a task of this size it is important to get priorities right and to make full use of existing sources of information.

It was decided to ask each department to identify, from its total occupation, a small proportion of buildings which it considered to be most urgently in need of improvement and to give certain information about them. So that the work would be spread to match the resources available, they were asked to do this for each Territorial Directorate of the PSA (London, seven English regions, Wales and Scotland). Each of these Directorates was then asked to examine the nominated buildings and to produce a costed scheme of improvement on which to base Estimates and plans for 1975–76. While this description is something of an over-simplification of the actual process, it has so far gone fairly smoothly, and, at the time of writing, the first phase, that of producing figures for 1975–76 Estimates, is almost complete.

In the meantime it has been possible to act more quickly in a small part of the office estate. About 10 per cent of it consists of single storey buildings put up to cope with the rapid expansion of the Service during and shortly after the Second World War, and known as Standard Office Buildings (SOBs). Although regarded as temporary at the time, it has been possible to replace but few of them; originally built to austerity standards they are nevertheless structurally sound, often on pleasant sites away from city centres. Because of their basic similarity it has been possible to devise a standard improvement package for them and work has actually started on the modernization of some. It is planned to deal with all remaining SOBs over a period of four or five years.

Another minor, though important, part of the OIP is concerned with the 900 or so typing pools in Government offices. Improvement here is aimed at sound deadening by the use of carpets and acoustic treatment,

but also has the effect of making these work places visually more attractive, with properly planned colour schemes incorporating curtains and other furnishings. This programme is now under way and should be completed in about three years.

Accommodation management

The provision of suitable office accommodation by the PSA depends to a great extent on the care and skill with which client departments formulate their requirements, and the quality of the working environment depends not only on what is provided but also on how it is managed and cared for by its occupants. Client departments are responsible for many accommodation functions, ranging from forecasting the amount and location of their future needs and negotiating with the PSA about how they are to be met, to domestic cleaning and the ordering of maintenance and repair work from the PSA or contractors. These tasks involve a wide range of staff, from full-time accommodation managers and their staff to local officials who supervise cleaners or order minor repairs as a sideline to their main jobs. Whatever the grade or involvement of the people concerned, they need to know of the PSA services available to them and how to use them, and, in the case of full-time staff, to acquire certain skills in accommodation planning.

While some departments have become very competent in this field, performance varies widely and there is a substantial training need, hitherto largely unrecognized, for departmental staffs. With the help of an inter-departmental working party, the WEJU is investigating this need and has already mounted a number of training courses for full-time accommodation staff. WEJU is also developing ideas for improving collaboration between the PSA and its clients aimed at the provision of better advisory services and more efficient use of office accommodation.

Conclusion

In this short article I have tried to deal with the general concepts underlying our work and have said nothing about the difficulties of finding the necessary resources of money and manpower. These difficulties are considerable but not insuperable and regulate the speed rather than the direction of advance. It is more important that there is now firmly established a comprehensive programme of improvement with four main aspects: machinery now exists for establishing and keeping up to date acceptable standards and specifications for new offices; programmes for bringing existing offices into line with these standards and specifications have been instituted; priorities have been established within these programmes so that the worst offices that cannot be replaced are being treated at an early stage; and good management and maintenance and better collaboration by occupying departments and the PSA are being encouraged so that once good working conditions are established they can be kept up.

Automated Management Information System for Overseas Estate

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Introduction

The Directorate of Estate Management Overseas (DEMOS) of the DOE Property Services Agency (PSA) is responsible for overseas properties and estates owned or leased by them for the use of Foreign and Commonwealth Office and PSA staff. The estate numbers over 2,000 properties in 306 cities in 136 different countries and is valued at approximately £86 million. (Rent allowance hirings and some post hirings controlled directly by the FCO are not included in the system described below.)

In April 1971 the Overseas Diplomatic Estate Board Study Group produced a report which recommended, among other things, that every effort should be made to improve the basis on which estate management decisions were taken. This led to an Interdepartmental Working Party of Treasury, Civil Service Department, Foreign and Commonwealth Office and Department of the Environment representatives being required to consider ways of providing improved management information on the overseas estate. The Working Party recommended:

(*a*) That all works expenditure and service charges should be identified to individual properties.

(*b*) That such information should be so recorded that expenditure on any property could be reviewed at any time and be presented to management at regular intervals.

(*c*) That the exceeding of acceptable levels of expenditure on any property should automatically be brought to management notice.

(*d*) That regular assessments of the value of the estate should be provided in the intervals between full professional evaluations so as to enable management decisions to be related to the value of the estate and make possible a system of acceptable standards for maintenance and other expenditure on any particular property.

The Management Services Operational Research (MSOR) Division of DOE was invited by DEMOS to assist in implementing the Working Party's recommendations.

Manual system

Information about the properties is held in two sections of DEMOS. The Estate Records Section maintains a compendium of information on estate index cards, one for each property. These include static information, e.g. description, address, type, etc, and dynamic information, e.g. valuation, rent, next break or expiry date, etc. The Finance Section holds information on maintenance and minor new works costs and on rents, taxes and service charges.

Although this system includes a lot of information, a great deal of research effort was needed to charge costs to individual properties even on a selective basis. Thus, to have provided a manual system satisfying the Working Party's recommendations would have required a considerable increase in the Estate Records and Finance Sections' staff which totalled 2 EOs, 9 COs and 2 CAs.

Proposed system

After a review of available facilities it was decided that the system should be automated. The use of a main frame computer was an obvious possibility but was ruled out because of the programming effort required and the difficulty of ensuring an acceptable turn-round time. The Olivetti DE523* was chosen because it offered an economic solution which has most of the advantages of a centralized system along with direct control of input data and ready access for output as required. It is basically an electronic desk-top keyboard machine with the following principal features:

(*a*) A read only memory (ROM) unit which controls peripheral devices and input in a pre-assigned format.
(*b*) A random access memory (RAM).
(*c*) A visual display unit (VDU).
(*d*) A typewriter-orientated keyboard of 64 characters.
(*e*) Two magnetic tape cassette units (a cassette can hold 250,000 characters).
(*f*) A serial printer which will output at 160 characters per second.

The RAM unit (an optional extra) provides the system with greater flexibility in that it introduces an arithmetical capability, multiple feature and range searches can be undertaken and data can be output in any desired format.

In broad terms, the method of operating the DE523 is to encode records onto magnetic tape by keying in data under control of a predetermined format program which carries out validation checks on the data. The information is keyed in accordance with the format indicated on the VDU which affords a visual check on input. Records can be searched by one unit of data or any combination of units within a

* CSD Management Services (General) Division has produced a short report giving further information on the potential use of the DE523 in the information storage and retrieval fields. Copies are available to Government Departments on request.

record. In this application the machine performs an automatic feature card type of search with the added advantage of reproducing the results as a display on the screen and also as hard copy if required.

About two days' training is usually sufficient to initiate a programmer/operator on the basic machine. Where the RAM unit is used as in this application, a week's training is recommended. In DEMOS there is one main programmer/operator, but all staff in the Estate Records Section can perform routine operations.

The DE523 system in DEMOS

The DE523 operates under program control. All systems design work is complete, basic programs for input, amendment and output have been prepared and validated and all property data along with the latest returns of costs have been input. The basic file record for a property is of approximately 500 characters contained in 50 data fields. Records of the 2,000 properties spread over five administrative areas are held on five cassettes, a new cassette being started for each area. Duplicates of all cassettes are kept to ensure security of records.

Each property has been given a unique 8-character alpha-numeric reference which contains five coded elements to enable rapid identification, input and retrieval of data.

Input

The DEMOS system provides a readily accessible form of information gathered from a wide range of sources and it is, therefore, essential to maintain the accuracy and completeness of the data in the system. To this end the automatic input control which determines the format and size of data elements is an aid, whilst a manual of procedures and instructions has been prepared detailing the source and units of all information held in the basic record, the format and method of input and also the format of output.

Two important features of the machine are the facilities to input a batch of search parameters and to overwrite or add elements of data to existing records. These are used in DEMOS for the input of amendments, for example, a unique property reference number is keyed in and the tape automatically searched until identification is established, the required record appears on the VDU, the amendment is keyed in and entered on tape. The automatic search is restarted by keying in the number of the next property to be up-dated and this is repeated until all records have been identified and up-dated. This method is appropriate when the file is organized serially and the amendments are sorted. When the file is random it is possible to input a batch of property numbers to be searched automatically. It is estimated that approximately 10,000 amendments will be input to the basic file each year.

Output

The output facilities are very flexible. All or any part of the stored data

can be searched and the answers output in any format, for example, in a particular area it may be necessary to identify all or specified types of properties where rents are between £X and £Y a year; to identify leases due for break or expiry between given dates; or to list all or specified types of properties where prescribed limits of maintenance expenditure have been exceeded. This can be done and the answers printed out without attendance by the operator after the keying in of instructions.

Output programs have been prepared to provide the various periodic and *ad hoc* returns hitherto produced manually and also the additional requirements of management indicated in the Working Party's recommendations. These main outputs are:

(*a*) Individual property records required as a day-to-day routine.
(*b*) Returns of properties where the maintenance costs/capital value ratio exceeds prescribed limits.
(*c*) A record of five years costs under 24 heads for each property, to be up-dated each year.
(*d*) Returns of (i) undeveloped sites and (ii) vacant accommodation, both required half-yearly; and (iii) lettings and sublettings, required annually.
(*e*) A break and expiry return for leased properties, required quarterly.
(*f*) A register of all properties, required annually.
(*g*) An analysis of the estate under 30 heads of detail for seven geographic areas, required annually.

Further requirements may call for programs for providing property values; for properties with common features such as type and usage in particular areas; and for properties where minor new works expenditure under particular heads has been incurred.

Costs

The cost of the DE523 and its peripheral equipment as delivered to DEMOS was approximately £7,000 (cassettes cost £2·60 each). Although the system has not led to any direct saving in staff costs, it provides the managers in DEMOS with ready access to information about the estate in any desired format.

Conclusion

DEMOS now has a management information system under local control which can provide readily and as often as necessary all the output hitherto prepared manually. Moreover, the additional requirements resulting from the recommendations of the Working Party can be satisfied without a commensurate increase in staff. There will also be considerable scope in due course for development of the system. For example the ease of information retrieval and the output/input compatability with a general purpose computer opens up the possibilities of systematizing the control of expenditure and of the use of financial planning models.

Computer Installations for Government Departments

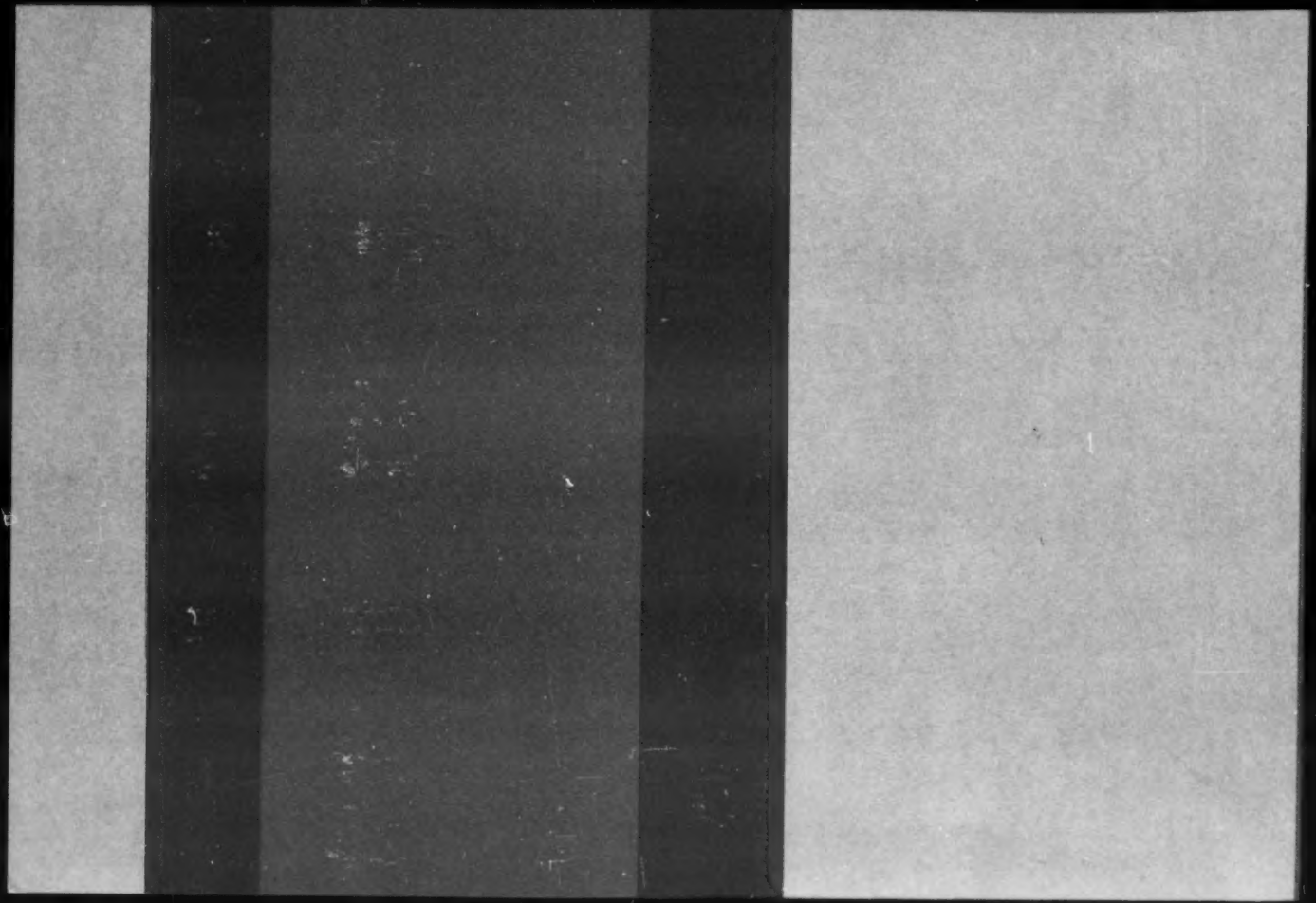
A list of all Government computers as at 1st January 1974 was published as a supplement to the May 1974 edition of MANAGEMENT SERVICES IN GOVERNMENT. Details of computers ordered during the period April to June 1974 are shown in the following table.

DATE OF ORDER	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
1B Computers on order for administrative and general purposes				
May 1974	MAFF	Guildford	Subsidy payments, payroll and statistics	ICL 1904S
May 1974	British Museum	London	Data collection and cataloguing	Varian V72
June 1974	Ordnance Survey	Southampton	Administration and training	ICL 1906S
2B Computers on order for scientific and technical purposes				
April 1974	Home Office	Kidlington	Police intelligence information	Honeywell 602S
April 1974	MOD (PE)	Westcott	Thermochemical studies	ICL 1904S
May 1974	MOD (Navy)	Portsmouth	Management information system for project	Honeywell 61/58

[1] Department Key (*Column* 2)

MAFF	Ministry of Agriculture, Fisheries and Food
MOD (Navy)	Ministry of Defence (Navy)
MOD (PE)	Ministry of Defence (Procurement Executive)

[2] Manufacturer Key (*Column* 5)

ICL	International Computers Ltd.
Honeywell	Honeywell Information Systems Ltd.
Varian	Varian Associates Ltd.

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